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Enchanted Writing

Enchantment ontology suggests new, unfamiliar ways to think about what writing is and what we are doing when we write, ways of thinking that can be hard to change, especially for those of us in the West. It suggests that writing is not an epistemic or even a socio-epistemic practice of interpreting the world but rather a behavior of intra-acting in the world, not a behavior dominantly driven by intentions or purposes but rather by responding to possibilities that arise through intra-actions, and finally not a behavior governed by effectiveness or efficiency but rather by creativity and accountability. Our habitual focus on specificity, purpose, and the effective communication of information in writing makes it difficult to perceive how all writing begins in intra-action and is realized through accountability "for what materializes, for what comes to be" (Barad 361) in the telling. These are the aspects of writing that enchantment ontology inspires us to focus on.

Robin Wall Kimmerer's essay "In the Footsteps of Nanabozho: Becoming Indigenous to Place" (*Braiding Sweetgrass*) demonstrates how habits of writing such as paying attention to and corresponding with all kinds of other beings, being open to learning from intra-actions, and connecting the past and present can generate possibilities for new futures. In her essay, Kimmerer, a botanist and member of the Citizen Potawatomi Nation, muses on the situation of immigrants as she walks through a spruce forest to a bluff over the Pacific Ocean, an area new to her. She tells of her encounters with the unfamiliar beings she corresponds with and relates them to the Anishinaabe story of Original Man (Nanabozho), who, as the last of all beings created, is also an immigrant. From these intra-actions, a new way of thinking about immigration and becoming indigenous arises, and her writing creates and accounts for this realization. Her new understanding of becoming indigenous also derives from her connections of her present situation with the origin story of Nanabozho. As she explains, for her people, time is not linear, and such "stories are both history and prophecy, stories for a time yet to come" (207).

Kimmerer tells how Nanabozho received instructions from the Creator "to walk in such a way 'that each step is a greeting to Mother Earth," which he understood to mean that he should learn the true names of all the beings, not so that he could master them but so that he might learn from them (206).¹ As Nanabozho greeted all the beings, they greeted him in return and he began to feel at home. As Kimmerer walks in the Pacific Coast forest where "no one knows [her] name," she follows Nanabozho by greeting "my Sitka Spruce grandmother" whose "swaying foliage is constantly murmuring to her neighbors"; she says the spruce will "eventually pass the word and my name on the wind" (206). "Names are the way we humans build relationship, not only with each other but with the living world" (208), Kimmerer says. The immigrant human and native plant are now corresponding, to use Tim Ingold's term for a kind of intra-action in which beings pay attention to one another by "moving along together" in "a dance of animacy" (M 106-7). As Ingold observes, the pattern is the same as in written correspondence, writing and reading, writing and responding.

Sitting under the sitka spruce and listening to the wind, Kimmerer ponders how immigrants might become indigenous to place. As she walks back to the trail, she recognizes a plant she had not noticed before, an immigrant from the east: the common plantain, called by the Potowatomis "White Man's Footstep" and by Linnaeus Plantago major, which refers to the sole of a foot. Plantain followed the white settlers west, and everywhere else they went, and made itself at home. Unlike other nonnative plants like loosestrife and kudzu that "have the colonizing habit of taking over others' homes and growing without regard for limits," plantain is a good neighbor: "Its strategy is to be useful, to fit into small places, to coexist with others around the dooryard, to heal wounds" (214). After five hundred years, plantain became a naturalized member of the community. Kimmerer remembers that, just as for Nanabozho, "the plants are our oldest teachers" (213). Out of her intra-action with her "old friend" plantain emerges a new possibility: maybe human immigrants could "follow the teachings of White Man's Footstep" (214). It is "by honoring the knowledge in the land, and caring for its keepers [that] we start to become indigenous to place" (210).

Kimmerer says that her book offers "a braid of stories meant to heal our relationship with the world" (x). Stories, even when they do not address humans' estrangement from the natural world, best exemplify the intra-active and creative aspects of writing. Rather than informing readers, stories engage readers by suggesting a path for them to follow, as Ingold explains: "The telling of stories is an education of attention.... To tell, in short is not to explicate the world, to provide the information that would amount to a complete specification, obviating the need for would-be practitioners to inquire for themselves. It is rather to trace a path that others can follow" (M 110). Ingold sees stories not as fictional accounts but as means of teaching, as do many Native American communities (cf. Basso 57–60). By tracing a path, pointing out "where to go and what to look out for" (Ingold, M 110), they encourage the habit of paying attention.

Introducing her book that addresses "the possibility of life in capitalist ruins," Anna Lowenhaupt Tsing also emphasizes the importance of being open to intra-actions. She asks, "What do you do when your world starts to fall apart?" and answers, " I go for a walk, and if I'm really lucky, I find mushrooms" (*Mushroom* 1). She argues that finding oneself "without the handrails of stories that tell where everyone is going and, also, why" (2), one can realize that "there are still pleasures amidst the terrors of indeterminacy" (1). Coming upon mushrooms that "pop up unexpectedly" reminds her of how indeterminacy engenders "multiple futures [that] pop in and out of possibility" (viii). She comments, "The uncontrolled lives of mushrooms are a gift—and a guide" (2), and she hopes her readers will follow where they lead her. Her writing thus begins not with intentions but with intra-actions: her response to the specific "autumn aroma" of matsutake mushrooms and the different stories this entanglement engenders.

Assumptions of Enchantment Ontology

Kimmerer's and Tsing's books not only highlight the enchanted aspects of writing, they also exhibit the central assumptions of enchantment ontology that are crucial to understanding this shift in perspective. When I began introducing the idea of how enchantment ontology could reorient our thinking about writing, I realized that it was not easy for others to grasp how great a shift it required. Responses of those attending my presentations and presentations of similarly oriented colleagues left us puzzling: why don't they get it? Though enchantment ontology has been developing over the past century, it still offers radical challenges to Western thought, challenges to the sharp division between the human and natural worlds, to essential and unchanging forms as the basis of reality, and to change as a difficult process involving external causes. Instead, it assumes:

Entanglement: parts of reality are entangled in intra-active phenomena from which emerge individual entities;

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Becoming: reality is a process of unceasing and contingent change in which everything is always in the process of becoming; and

Creativity: novelty is immanent, inevitably emerging in a self-organizing world.

These assumptions also envision the universe as a single system, a cosmos, not divided into the separate realms of nature and society.

As Kimmerer relates how she and Nanabozho learn from the teachings of other beings, she affirms that humans are entangled in the cosmos, corresponding with sitka spruces, plantains, the sounds of the wind, the story of Nanabozho. His story is part of the intra-action, the past entangled with present and future—Nanabozho's footprints "lie on the path behind us and on the path ahead" (207)—and is changing, becoming, along with Kimmerer and other entities in the intra-action. And her realization of how immigrants can become indigenous demonstrates the creativity of intra-action. The assumptions describe overlapping aspects of enchantment ontology, not a linear process, and Tsing's recognition of the positive aspects of indeterminacy encapsulates how the assumptions work together: when entities are understood not as essential and separate unities but as constantly intra-acting and becoming, possible futures continually "pop in and out of possibility."

The concept of entanglement goes beyond the posthumanist acknowledgment of the existence and relevance of other beings and cultures in dispelling the specter of the rational, free man as the universal condition of human existence. Entanglement is not just a way of saying that we're all in this together, that everything is connected in causal chains. As Karen Barad explains, it is a perspective drawn from quantum mechanics, which understands "the primary ontological unit to be phenomena, rather than independent objects with inherent boundaries and properties" (333). Subjects, objects, and agents emerge from specific phenomena of novel becoming, which entangle some "parts" of the material world, a process Barad calls intra-action. All "entities" change and become something else in intra-action; Donna Haraway, who calls this process reciprocal induction,² describes her training with her dog Cayenne as "partners-in-the-making through the active relations of co-shaping, not [as the interaction of] possessive human or animal individuals whose boundaries and natures are set in advance of the entanglements of becoming together" (When 208).

The ongoing becoming of entities through intra-action is captured in Alfred North Whitehead's concept of concrescence: "The actual world is a process, and . . . the process is the becoming of actual entities . . . also termed 'actual occasions'" (PR 22). Concrescence is the "production of novel together-

ness": "The novel entity is at once the togetherness of the 'many' which it finds, and also it is one among the disjunctive 'many' which it leaves; it is a novel entity.... The many become one, and are increased by one" (21). Whitehead asserts, "How an actual entity becomes constitutes what that actual entity is. ... Its 'being' is constituted by its 'becoming'" (23). Each entity, as an actual occasion, is a specific, unique holding together of disparate entities. Concrescence is somewhat analogous to Martin Heidegger's equally enigmatic notion of the fourfold, in which things come to presence through gathering aspects of the world "into something that stays for a while: into this thing, that thing" ("Thing" 172). The bridge "gathers the earth as a landscape around the stream"; it "escorts the lingering and hastening ways of men to and fro, so that they may get to other banks and in the end, as mortals, to the other side"; the bridge is an actual entity that "gathers to itself in its own way earth and sky, divinities and mortals" ("Building" 150-51). Whitehead says, "In their natures, entities are disjunctively 'many' in process of passage into conjunctive unity" (PR 21). In the "creative advance" of concrescence, a novel entity, the one, arises from a gathering of some of the many already existing actual entities and thereby adds one more entity to the world.

Creativity follows logically from the first two assumptions: the singleness of reality in which entanglement results in a continual and irreversible becoming of new entities. Intra-action, or concrescence, explains the creativity inherent in the cosmos. Change and creativity are no longer seen as motivated by some external cause but are events in which multiple agents participate and for which they are jointly responsible. Everything is becoming as intra-acting entities respond to one another and "trade their stuff," as complexity theorist Stuart Kauffman puts it (HU 129). Complex systems theory, which developed in computing, biology, and other fields in the mid-twentieth century, explains how "order for free" emerges from intra-action with no need for central control or separate instigating agents. Many more entities are acknowledged as agents, or actants, as Bruno Latour calls them, since agency is understood as involving affective entanglements rather than conscious purpose.

The understanding of systems as open, entangling natural and social systems, also distinguishes enchantment ontology from social constructionism and most versions of postmodernism which, in contrast, assume a divide between natural and socially constructed realms. Arguing forcefully against the bifurcation of nature into "the nature apprehended in awareness and the nature which is the cause of awareness," Whitehead maintained that perceiving the red sunset is "not an action of nature on the mind. It is an interaction within nature" (CN 31). The experience of "the red glow of the sunset" is as much a part of nature as are "the molecules and electric waves" by which sci-

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ence explains the glow (28). Kimmerer also recognizes what she learns from intra-acting with plants as on a par with what she knows from studying them scientifically. Thus when Humberto Maturana and Francisco Varela say that "every act of knowing brings forth a world" (Tree 26), they do not mean that our minds or society or culture creates a representation of the world, an alternate or shadow world with a tenuous connection to reality, a world of infinite and endless relativity.3 As Barad says, "Realism, then, is not about representations of an independent reality but about the real consequences, interventions, creative possibilities, and responsibilities of intra-acting within and as part of the world" (37). Steven Shaviro, too, observes that the pragmatic consequences of Whitehead's and Gilles Deleuze's rejection of essentialism are quite different from the aporias of the deconstructionists and the polite conversation of Richard Rorty (Without Criteria 145-46). For process philosophers, "evanescence, becoming, incessant novelty, and 'perpetual perishing' do not make reference and grounding impossible. Rather, these experiences are themselves our fundamental points of reference" (Shaviro, Without Criteria 151). All our experiences tell of what we know about the world and support our becoming. In writing as in living, we intra-act within one world, and our intra-actions create the patterns in time that compose our world.

In what follows, in order to more fully elucidate how enchantment ontology reorients our understanding of writing, I trace its origins in complexity theory and process philosophy. I then contrast my approach with that of two other scholars in rhetoric and composition who also draw on versions of enchantment ontology. And finally, I address the question of how habits such as paying attention and being open to possibilities can transform effective writing into enchanted writing.

Origins of Enchantment Ontology

The roots of enchantment ontology go deep into Western intellectual history.⁴ The assumption of a single reality can be traced at least to the end of the nineteenth century as thinkers in both the sciences and humanities began undermining what Latour famously called the modern constitution, the rigorous distinction between human society and nonhuman nature that defines the project of humanism, in favor of a vision of "the common production of societies and natures" (WM 141). In the nineteenth century, Charles Darwin, along with Lamarck and Alfred Russel Wallace, unsettled the belief in the great chain of being by suggesting that species arise and die out in interaction with each other and their environments. At the turn of the twentieth century, a group of Germanspeaking scientists comprising the "Wholeness" movement argued that viewing "phenomena less atomistically and more 'holistically,' less mechanistically and more 'intuitively'... could lead to the rediscovery of a nurturing relationship with the natural world" (Harrington xii). As they said, "It would 'reenchant' the world," voicing the idea long before Morris Berman's best-selling book (Harrington xii). Wholeness began with Hans Dreisch's fin-de-siècle revival of vitalism and was elaborated not only in the work of scientists such as Jacob von Uexküll but also in the process philosophy of Henri Bergson and Alfred North Whitehead. Uexküll's observations of how organisms interacted with their environments to create functional circles, or "soap bubbles," later inspired Heidegger's concept of being-in-the-world, Maurice Merleau-Ponty's notion of the intercorporeal self, and, in part, Deleuze's concept of affect.⁵

Uexküll, in turn, had been inspired by Immanuel Kant, who, in the *Critique of Judgment*, had suggested that humans in the mode of aesthetic response interact with the world much as do other animals. The aesthetic subject, as Shaviro describes it, "neither comprehends nor legislates, but only feels and responds . . . this subject is itself *informed* by the world outside, a world that (in the words of Wallace Stevens) 'fills the being before the mind can think'" (*Without Criteria* 13). William Connolly suggests that Kant also saw animal behavior as not simply driven by natural laws but as purposive, like that of humans. An organism, according to Kant, "exists as a natural purpose . . . [it] is both cause and effect, both generating itself and being generated by itself ceaselessly" (249; qtd. in Connolly, *Fragility* 106).

As Anne Harrington explains, Uexküll's concept of a functional circle uniting organism and environment arose out of his close study of these openings in Kant's thought: "It now seemed self-evident to him that every animal, every living thing, far from being a passive product of an external world . . . was also, in fact, an active *creator* of its own 'external reality'" (41). For Uexküll, every living thing, all organisms, human and nonhuman, are *both* products and creators, and reality is the experiencing of this process. In his *Theoretical Biology*, he extends this idea to encompass scientists themselves, arguing that "Nature imparts no doctrines: she merely exhibits changes in her phenomena. We may so employ these changes that they appear as answers to our questions" (ix). The natural world responds to the natural scientists' questions, just as the garden responds to the gardener, creating "doctrine" (theories) and beauty and sustenance. For Whitehead, Uexküll's functional circles coalesce into nature as a system of interrelated and responding attributes, much as it does in Deleuze (see Buchanan 174–76).

Whitehead also cleaves to the second assumption of enchantment ontology, the understanding of change as an arc of becoming: "It is nonsense to conceive of nature as a static fact, even for an instant devoid of duration. There is no na-

ture apart from transition, and there is no transition apart from temporal duration" (MT 152; and see CN 54). Whitehead got the idea of duration from Bergson, who conceived of time as no longer "a mere quantitative measurement" but rather "an inner principle of existence" (Shaviro, Without Criteria 76). Bergson argues that existence is a matter of change: things that do not change do not endure. Thinking of time as a neutral succession of instants strung on a cord is an illusion of consciousness, an abstraction from our inner experience of time, which is duration: "The continuous progress of the past which gnaws into the future and which swells as it advances . . . all that we have felt, thought and willed from our earliest infancy is there, leaning over the present which is about to join it, pressing against the portals of consciousness that would fain leave it outside" (4-5). We cannot relive any past moment because we cannot erase our subsequent formative experiences. Thus time is irreversible; each moment "is something new added to what was before" (Bergson 6). What is true of human existence is also true of everything in the universe, he argues, concluding, "The universe endures. The more we study the nature of time, the more we shall comprehend that duration means invention, the creation of forms, the continual elaboration of the absolutely new" (Bergson 11). As Shaviro says, with the notion of duration, "becoming is liberated from static being, and the new can be privileged over the eternal" (Without Criteria 76). The continual elaboration of the absolutely new-creativity-is the third assumption of enchantment ontology, the positing of change as immanent and inescapable rather than resulting from final purpose or human intention—or from divine intervention.

In general terms, the emergence of novelty can be traced from the dawn of Western thought in Heraclitus and Aristotle through Darwin's vision of the evolution of "endless forms most beautiful and most wonderful" (450) and to complexity theorist Kauffman's observation that "the universe in its persistent becoming is richer than all our dreamings" (I 138). Creativity, Whitehead says, is "the ultimate metaphysical principle . . . the advance from disjunction to conjunction, creating a novel entity other than the entities given in disjunction" (PR 21). As Isabelle Stengers points out, it is not to be confused with "an underlying impulse" (TW 256). Creativity is not a power belonging to entities but the basis of their existence, the process through which they become what they are through affecting and being affected by other entities, as Deleuze suggests and as Benedict de Spinoza proposes: "The striving by which each thing strives to persevere in its being is nothing but the actual essence of the thing" (75). Whitehead says creativity "is the pure notion of the activity conditioned by the objective immortality of the world"; like Aristotle's "matter," "It is that ultimate notion of the highest generality at the base of actuality" (PR 31).

The emergence of novelty from the activity of the world-"the advance

from disjunction to conjunction"-is not limited to living entities nor has it been addressed only by philosophers and biologists. Jane Bennett, drawing on Spinoza and Deleuze, emphasizes that "creative vitality" is harbored not only by living organisms but also by material things (Vibrant 125n11). Fritjof Capra, in his account of the development of complex systems theory, notes the early and little-known work of the medical researcher, philosopher, and economist Alexander Bogdanov who advanced a general systems theory in 1912–17: "Bogdanov shows how organizational crisis manifests itself as a breakdown of the existing systemic balance and at the same time represents an organizational transition to a new state of balance" (45). Bogdanov's work anticipates physicist Ilya Prigogine and chemist and philosopher Isabelle Stengers's analysis in 1984 of how order arises out of chaos: "In far-from-equilibrium conditions we may have transformation from disorder, from thermal chaos, into order. New dynamic states of matter may originate, states that reflect the interaction of a given system with its surroundings. We have called these new structures dissipative structures to emphasize the constructive role of dissipative processes in their construction" (12). Their example of "entities formed by their irreversible interaction with the world" (95) is Michel Serres's analysis of turbulence, which forms through spontaneous, unpredictable deviations in the rate of speed of a river as it encounters rocks or a steeper slope (141).

Prigogine and Stengers credit Whitehead as articulating the basis for their description of the new physics: "Whitehead . . . demonstrated the connection between a philosophy of *relation*—no element of nature is a permanent support for changing relations; each receives its identity from its relations with othersand a philosophy of innovating becoming. In the process of its genesis, each existent unifies the multiplicity of the world, since it adds to this multiplicity an extra set of relations. At the creation of each new unity 'the many become one and are increased by one" (95; quoting Whitehead, PR 21). Whitehead's articulation of permanence and change offers a mode of thinking he calls an adventure of ideas. Understanding becomes a matter of composing entities, events, and meanings, rather than of comprehension. His approach is constructivist not in the sense of being arbitrary or contingent, a "mere construction," but in the sense of "a construction that 'is able to hold," that provides a way of addressing a situation that inspires questions "that shed light on features that are important to each situation" (Stengers, TW 18-19). Whitehead says, "Understanding is never a completed static state of mind. It always bears the character of a process of penetration, incomplete and partial" (MT 43). Oppositions or contradictions do not resolve into a higher unity, as in the Hegelian dialectic; rather both participate in "the creative advance into novelty," each as "the instrument of novelty for the other" (Whitehead, PR 349).

Enchantment in Rhetoric and Composition

As I mentioned in the introduction, I am not the only or even the first rhetoric and composition scholar to draw on a version of enchantment ontology to reorient our thinking about writing.⁶ To sharpen the focus of my project, I now consider how it relates to two salient examples of this work: Louise Wetherbee Phelps's *Composition as a Human Science*, and Thomas Rickert's *Ambient Rhetoric*. I am particularly interested in contrasting the focuses and the theoretical frameworks of their projects with mine.

Published in 1988 and drawing on Stephen Pepper's contextualist theory and on quantum physics, Composition as a Human Science offers a surprisingly early and percipient presentation of the fundamentals of enchantment ontology: reality is understood as an event including both nature and society and characterized by change; entities are "mutually defining and transactive" (32); observers are "participants in the reality they observe and [also] creators of it" (142). Citing Prigogine and Stengers, Phelps observes, "Within such a system emergent novelty, unpredictable new orderliness, becomes possible" (33). Still, as she addresses her central question of what kind of discipline composition studies is (or should be) and subsidiary questions of what writing is and what teaching writing involves, she limits herself to the social realm of discourse, the dynamism and intersubjectivity of writers and readers coconstructing meanings through the medium of texts. For Phelps, writing begins in the cognitive interactions among writers, readers, and texts rather than in the affective intra-action of entities of all kinds in the world. In line with her project of defining composition as a discipline whose imperatives are "to develop or synthesize organized knowledge about human experiences of writing . . . and, as a praxis based on this knowledge, to cultivate personal growth in literacy and discursive consciousness" (75), she understands contextualism as an "epistemic revolution" in the human "way of knowing" (40).

Phelps's cognitive and epistemic approach follows naturally from her reliance on Paul Ricoeur's version of phenomenology and on Fritjof Capra's and Gary Zukav's treatment of the "new physics" in which, "human consciousness," though "embedded" in the world (23), plays the "creative role . . . in constituting reality as the phenomenal world of everyday experience" (142). She does emphasize that the single subject cannot solipsistically constitute reality; she follows Charles Taylor in describing "social reality as a sphere of communal, experiential meanings, constituted and expressed largely through language" (Phelps 166) that also includes, as Calvin Schrag argues, background experienced totalities—"facts of perception, practical activity, and sociopolitical action [that] are already ways of comprehending the world" (Phelps 23). The interaction between the observer and this human world—as well as the interaction between writer, reader, and text—is "discursive and hermeneutical in character" (166), a conscious, cognitive, "communicative transaction" (198).

This is a subtle and persuasive characterization of the intersubjective creation of meanings and of social reality in writing. What it does not account for—excusably, given Phelps's focus and theoretical framework—is the creativity of the world beyond human consciousness, a creativity that is not consciously intended but is an important part of the behavior of writing, if not of discourse, which, according to Phelps, is "the act of conscious subjects" (198). The novelty Prigogine and Stengers talk about emerges from complex systems, not from conscious human intentions; it emerges in intra-action, or concrescence, in preconscious material reality, which as Barad claims, cannot be separated from the social world of meanings: "Matter and meaning cannot be dissociated. . . . Mattering is simultaneously a matter of substance and significance" (3).

Speech act theory made a move toward recognizing the preconscious aspects of linguistic interaction, as Ricoeur acknowledges. J. L. Austin posited the notion of the perlocutionary act as an act of affecting the hearer in some way, but it is downplayed in his discussion in favor of the locutionary and illocutionary acts because it is not conventional and often unintentional (103, 107). Ricoeur goes farther: he excludes the perlocutionary act from discourse because of its affective character: "The perlocutionary act is precisely what is the least discourse in discourse. It is the discourse as stimulus. It acts, not by my interlocutor's recognition of my intention, but sort of energetically, by direct influence upon the emotions and the affective dispositions" (Ricoeur 132–33; qtd. in Phelps 151). The difference between illocutionary and perlocutionary acts is the difference between conscious cognitive intentions and preconscious affects, which are contingent intrusions into the ideal of successful communication—and which are an important source of creativity in discourse of all kinds.

While Phelps is concerned with defining the discipline of composition, I begin instead by asking, why does writing matter? I take my direction from Whitehead's process philosophy and Barad's reading of quantum physics,⁷ both of which center on the ontological question of what is real rather than the epistemic question of how we come to know reality and both of which are resolutely affective rather than humanist and cognitive in orientation. Thus, instead of seeing writing as the intersubjective creation of meanings that represent or interpret the world, I focus on the affective intra-actions among humans and other entities that precede and create the possibility of the construction of new meanings. I claim that writing matters because it constitutes not just the reality

of human experience but creates material entities or phenomena that are added to the entangled cosmos, entities that make a meaningful difference. I contend that it is with this fundamental creativity that writing begins.

The different consequences arising from defining writing as a cognitive communicative transaction and defining it as an affective innovating becoming are illuminated in the contrast between Ricoeur's and Whitehead's treatment of contradictions. Phelps describes Ricoeur's "third way" as a dialectic "strategy for opposing two sides of a polarity in order to discover the limits of each, often through a third term" (190). This dialectic strategy draws attention to the constitutive relation between the sides of the polarity-how structure and event, for example, depend on and limit each other-but Ricoeur's is a dialectic that does not resolve, instead infinitely postponing a synthesis and leaving the terms in a "living tension" (Phelps 190). Thus, for example, Ricoeur comes to an understanding of language as "the 'incessant conversion' of structure and event into one another in discourse" where the third term mediating the polarity is the articulated word, which "makes the sign actual, but also" returns "the event to the system" (Phelps 196). Phelps explains: "The polysemy of the lexicon is nothing but a record of the history by which context makes words mean . . . in speech the word is constantly charged with new use-values, but its possible values at any given moment are constrained (though indefinitely) by existing values laid down or sedimented in the system" (196). For Ricoeur novelty is attributed solely to human consciousness (the writer or speaker) which is constrained by and then assimilated into the linguistic system. Dialectic is an interpretive method that can enable a deep understanding of conflictual relationships-how linguistic structure limits the creativity of the discourse event-but it cannot easily account for the creation of new entities, new words, new meanings.

Whitehead addresses the relation of structure and event as the relation of permanence and change. For Whitehead, opposites are not static poles in conflict, they do not limit each other, nor do they exist in a "living tension" within a third term. They are instead contrasting processes, both participating in "the creative advance into novelty," each as "the instrument of novelty for the other" (PR 349). Permanence is associated with the enjoyment of the completed unity, the many becoming one, and change with the appetition for the potential that increases the many by one. The illusion of opposition between permanence and change (or structure and event) is converted into a contrast, and the process celebrates both appetition and enjoyment in the creation of new entities (PR 348).

Whitehead's treatment of oppositions as contrasts was motivated by an ethical stance that is important in understanding why I argue for writing as

fundamentally creative. Stengers explains that Whitehead was "terrified" by the "trick of evil," professional habits (associated with the industrial revolution) that insisted on compliance, that relied on asserting one side of a polarity as true or good and thereby suppressing doubt and curiosity about the possibilities of the other side. His adventure of ideas, his speculative philosophy, was an attempt to transform those stultifying professional habits by mobilizing the possibilities that lurk in the interstices of contradictions (TW 333). Professional habits and creative habits respond to interstices differently, as Stengers explains: professional habits behave like a cement wall while creative habits behave like a wall of dry stones. "Cement rejects the interstices in which the weed grows that will one day crack it open. . . . But the wall of dry stones is not defined against the interstices; the latter belong to it just as much as the stones that make it up. . . . Whitehead's wager is that we can learn [habits] that enable us to celebrate together both the obstinate stones and the interstices that will transform them into preconditions for what will eventually displace them" (TW 274-75). Accepting the interstices as contrasts rather than contradictions enables societies to move beyond insisting on "what everyone knows to be true," and beyond the deadlock of dialectic, whether resolved or in tension, to discovering what could be possible. The trick of evil can only be overcome when "what was felt as intolerable be accepted, canalized, admitted to infect its social environment, making it capable of original responses" (TW 333-34). Instead of understanding the polarities of permanence and change as a living tension, Whitehead's speculative philosophy posits a living process of the creation of mattering and meaning together: the newly created entity-perhaps the path of stepping-stones that the collapsed wall becomes-is material and matters.

In addition to the two imperatives that Phelps assigns to the discipline of composition—to develop organized knowledge about writing, and to cultivate growth in literacy—she notes that "some would add" a third imperative: "to make literacy an effective force for social critique and change" (75). I hold to a revised version of this imperative. Phelps was rightly wary about social critique, for in the 1980s, the "social turn" in composition had spawned practices of "critical pedagogy" that often verged on indoctrination of students into particular ideological positions.⁸ Critique is not an effective method for bringing about change. Whitehead's understanding of how contrasts create new possibilities offers instead a positive way that writing can effect change not only in society but in the world.

Published in 2013, twenty-five years after Phelps's book, Thomas Rickert's *Ambient Rhetoric* significantly furthered the increasing interest in enchantment ontology in rhetoric and composition. Though he focuses on rhetoric

while I focus more on writing, his theoretical framework is very similar, with differences mainly in emphasis. Rickert's project, as stated in his introduction, is to offer "a more comprehensive understanding" of rhetorical theory and practice as ambient (3). He argues that rhetoric is ontological and material, a human modality of bringing about change through being-in-the-world in a responsive way, just as I argue that writing creates worlds through intraaction in the world. He defines ambient rhetoric as "a responsive way of revealing the world for others, responding to and put forth through affective, symbolic, and material means, so as to (at least potentially) reattune or otherwise transform how others inhabit the world to an extent that calls for some action" (162). For Rickert, as for me, rhetoric and writing begin in the first assumption of enchantment ontology: ambience and attunement refer to the "presymbolic persuadability" of the world that entanglement produces.9 In his focus on responsiveness and transformation, he emphasizes as well the second assumption of enchantment ontology: becoming, or change. But in drawing on Heidegger's notions of dwelling and disclosure (revealing), he does not focus as much on the creation of new entities and new possibilities as I do in drawing on Whitehead's notion of the concrescence of actual entities.

Attunement refers to the specific ways we are entangled in the world: "It indicates one's disposition in the world, how one finds oneself embedded in a situation ... [that] results from the co-responsive and inclusive interaction that brings out both immersion (being with) and specificity (the way of our being there)" (Rickert, Ambient Rhetoric 9). To emphasize, attunement is not something we do; we find ourselves in, or as Heidegger says, we are thrown into, the world. "We are always already attuned; there are only changes in attunement" (9). Disclosure, or revealing how we are embedded, is also not solely a result of human agency; rather, "Being-in-the-world discloses. That is to say, there is a mutually conditioning amalgam of humans, animals, environment and things that co-responsively produce disclosure, including, necessarily, the forms of disclosure that render these entities as what they are for one another, ... something akin to relational conditioning as yielding being-together-in-theworld" (183). Disclosure reflects the process Haraway calls reciprocal induction, which produces "partners-in-the-making through the active relations of co-shaping" (When 208), extended here to that mutually conditioning amalgam that produces the larger social structures of ways of being.

Heidegger argues that dwelling is the human way of being; it discloses "the manner in which we humans *are* on the earth" ("Building" 145). Arguing that dwelling and building derive from the same Old English and High German verb *Bauen*, Heidegger observes that to dwell, which means "to remain, to stay in place," also means to build, and that "both modes of building—build-

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ing as cultivating . . . and building as the raising up of edifices-are comprised within genuine building, that is dwelling" ("Building" 144-45). Rickert explains that dwelling "conveys active comportments toward the world ... enacted less as the perpetuation of mastery and control than as a 'letting be' that spares, preserves, and cultivates human beings in the world or, just as important for Heidegger, cultivates world as part of what already entails human being, namely, the manner in which we dwell" (34). He also argues that ambient rhetoric is "integral to our dwelling in the world": "rhetoric is revealing and doing—doing as revealing and revealing as doing" (33). He elaborates: "Instead of being only the most conscious, willed aspects of discursive production, rhetoric reveals and constitutes the informational environment within which we flourish, even as it works in and through both the existent informational situation and the local material environs" (34). He offers the sustainable way of being of the residents of Toronto Island, in Ontario, as an example of dwelling: the island "gathers and is gathered by the fourfold" so that it is "integral to the unique character of dwelling there" (266). The residents "free their island to be what it is precisely by attending to the island as an island," not as a resource or a preserve; this freeing is the comportment that is the essence of dwelling (267–68). Dwelling thus implies an ethical stance that Rickert, in his conclusion, connects with Barad's conclusion that "a delicate tissue of ethicality runs through the marrow of being" (Barad 396).

I, too, argue that writing involves not just conscious, willed discursive production but an active comportment toward the world, a paying attention that is not a matter of mastery, but a letting be, though for me, paying attention is not "a freeing to let something be what it is" (268) but rather a freeing to let something become what it can become in intra-action. And I, too, follow Barad in arguing that entanglement in the world bestows an ethical onus. Rickert quotes from the final paragraph of *Meeting the Universe Halfway* that begins with the sentence I quoted above, but he elides from Barad's penultimate sentence something that distinguishes her stance from Heidegger's. Rickert's quotation ends: "Meeting each moment . . . is an ethical call" (271). The full sentence reads as follows: "Meeting each moment, being alive to the possibilities of becoming, is an ethical call, an invitation that is written into the very matter of all being and becoming" (396). Where Heidegger focuses on dwelling as an ethical way of being, as "genuine building," Barad focuses on responding to the possibilities of becoming.

Rickert addresses this difference in his conclusion, acknowledging that in his emphasis on dwelling as preserving and cultivating places as "materialsocial-hermeneutic" ecologies, he may have seemed to be ignoring a "countercurrent" of "movement and change, hybridity and otherness" (272). He argues: It is important to balance an attendance to what is present with an attendance to what withdraws and to what the future brings so that we are open to whatever further disclosive possibilities may become manifest.... We should seek neither static being nor endless becoming but the resting of both trajectories within rhetoricity itself. In other words, we need to understand disclosure as something always ongoing and transforming in accordance with the play of being-in-the-world, attuned simultaneously to what matters to us now while mindful that we cannot take reality for the simple presence of beings as they seem. (280)

His argument for balancing attendance to what is present with attendance to what withdraws would seem to accord well with Whitehead's reconfiguring of the contradiction of permanence and change into a process of concrescence that celebrates both enjoyment and appetition in the creation of new entities, especially as it aligns with Whitehead's fear of the tyranny of "what everyone knows to be true." But Heidegger's notion of revealing as the play of disclosure and withdrawal remains focused on the essence of things, their Being, and not on the creativity arising from intra-action. While disclosure frees something to be what it is, concrescence creates new entities, new possibilities.

In his lengthy consideration of disclosure in *Parmenides*, Heidegger explains that disclosure is not simply the opposite of concealment: "Instead, the dis-closure [Ent-bergen] is at the same time an en-closure [*Ent*-bergen], just like dis-semination, which is not opposed to the seed, or like in-flaming [*Entflammen*], which does not eliminate the flame [*Flamme*] but *brings it into its essence*" (133; emphasis added). Disclosure doesn't simply reveal what was hidden; it brings it fully into active being, as in the dissemination of seed. The enclosure in which a being attains to Being is the open, a space in which humans see the truth of Being: "Because he has the word, man, and he alone, is the being that looks into the open and sees the open in the sense of $\alpha\lambda\eta\theta\epsilon\varsigma$ [truth]" (155). Rickert allows that, as Heidegger argues, animals cannot get a sense of being as Being, but he argues that they can practice rhetoric "in activities that are, in some fashion corresponding to crowlike ways of disclosure" and thus that "disclosure is worldly" (173, 281). But what, then, can be meant by saying disclosure frees something to be what it is?

Rickert refers to Barad's reading of Niels Bohr, which demonstrates that "what we call physical reality is inseparable from the measuring or observational apparatus that renders something as what it is," and says, "Disclosure is itself ontological, and there are no simple, determinate, and preexisting objects—or *concepts*—independent of observation" (283). But his conclusion to this line of thought—"complex dances of mutual interaction are not aftereffects of already existing objects but rather the necessary precondition for the particular 'look' and 'stand' of an object" (283)—is not quite the position Barad is arguing for.

When Barad argues that "the primary ontological unit is not independent objects with inherent boundaries and properties but rather phenomena" (139), she is not concerned with objects; she is intent on shifting attention from objects to the phenomena through which material articulations of the world (things, beings, concepts) come to matter. This is the difference she draws between interactions and intra-actions: "Phenomena are the ontological inseparability/entanglement of intra-acting 'agencies'" through which "particular concepts (that is, particular material articulations of the world) become meaningful" (139). She elaborates: "phenomena are differential patterns of mattering ('diffraction patterns') produced through complex agential intra-actions of multiple material-discursive practices or apparatuses of bodily production, where apparatuses are not merely observing instruments but boundary drawing practices—specific material (re)configurings of the world—which come to matter. These causal intra-actions need not involve humans" (140). She concludes: "The world is an open process of mattering through which mattering itself acquires meaning and form through the realization of different agential possibilities" (141). In Barad's account, intra-action creates new meaningful articulations; meanings are not disclosed from the hidden depths of what an object is, from an object's fulsomeness, what Graham Harman calls its "grand dark abundance" (125; qtd. in Rickert, Ambient Rhetoric 200), or revealed from depths harbored by the world (Rickert, Ambient Rhetoric 213). They are not aspects of an essential entity that were withdrawn from presence, as Rickert implies in his analysis of the community of Toronto Island: "The island is never brought fully to presence, since part of it withdraws, and that withdrawal is also important" (260).

Also thinking in part with the quantum theory of Niels Bohr, Whitehead, too, emphasizes how intra-action produces new entities in an ongoing way. Although earlier I said that Whitehead's notion of concrescence was somewhat like Heidegger's notion of the fourfold, there is a difference. While in the fourfold, aspects of things come to presence, concrescence is instead the intra-active "production of novel togetherness" (PR 21). Whitehead asserts, "*How* an actual entity *becomes* constitutes *what* that actual entity *is*.... Its 'being' is constituted by its 'becoming'" (PR 23). It creates itself by means of its prehensions of other entities—"this self-functioning is the real internal constitution of an actual entity" (PR 25)—a process that is characterized as a decision: Stengers says, it "'decides for itself': thus, and not otherwise" (TW 263). Whitehead says that "decision" "is used in its root sense of a 'cutting off," a separation of what matters from what does not, "an activity procuring"

limitation" (PR 42–43), in other words, what Barad calls a boundary drawing practice. "The satisfied actual entity embodies a determinate attitude of 'yes' or 'no" (PR 212). This is the phase in concrescence of the enjoyment of the completed unity, but it is followed again by appetition, as the one rejoins the many that it left. "The real internal constitution of an actual entity progressively constitutes a decision conditioning the creativity which transcends that actuality" (PR 43).¹⁰

Like Barad, Whitehead thus emphasizes the phenomenon of becoming over being, referring to actual entities also as "actual occasions" (PR 22) or "events" (SMW 194) that arise as reconfigurings of the world. Also like Barad, he emphasizes that what is created is a new mattering or value: an event is "the realization of a definite shape of value . . . a matter of fact which by reason of its limitation is a value for itself; but by reason of its very nature requires the whole universe in order to be itself" (SMW 194). Entities have value and meaning in themselves, but their values and meanings arise from their relations to the whole universe.

The shift from focusing on objects to focusing on phenomena or events of becoming is crucial to understanding "the complex dances of interaction"or rather of intra-action-that Rickert refers to. Rickert's position is not as resolutely focused on things as Harman's is, but he still risks the quandary Harman falls into of not being able to account for how objects relate to one another, or "touch"; in other words, how they change. In a debate with Latour at the London School of Economics, Harman says, "Things are not just placed in vacuum-sealed bubbles that never touch. They do touch. And that's what has to be explained. Given that an object by analysis reveals that it should be something that withdraws from all relations (at least by my analysis) then you just have to figure out that there is this paradox. Because, on the one hand, objects seem like they should be isolated, and yet relations and events do occur" (Latour et al., Prince 70). Latour's answer is simple: "Things-in-themselves are actually things that you reach, which is always a paradox" (Prince 71). Earlier in the debate, Latour says he is puzzled by how Harman seems to understand Latour's position on this so well in the first part of Prince of Networks (Harman's book about Latour) but in the second part shoehorns it "into a problem which involves an alternative between a thing that would be made of its relations and a thing that would be made of its inner intimacy" (43-44). Latour follows Whitehead in rejecting both options: "For me it's precisely because of the irreducible singularity (which you sometimes call the inner kernel of things) that they have to be translated without ever emptying their kernel" (43). For Latour as for Whitehead the irreducible singularity of an object is the event of its actual occasion, which is continually being translated in its

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trajectory of becoming. Things are inexhaustible because they are always becoming something else in intra-action. They are created *through* relations, but they do not consist only *of* relations. Rickert emphasizes the need to be "open to whatever further disclosive possibilities may become manifest" (*Ambient Rhetoric* 280), but Heidegger's emphasis on the Being of entities cannot account for how those possibilities arise. Whitehead's concept of the propositions that arise in concrescence enables him to articulate a process of positive change.¹¹

To sum up how my project differs from Rickert's, I suggest revising his definition of ambient rhetoric into a definition of enchanted writing: "Enchanted writing is a responsive and responsible way of creating [not revealing] the world through intra-action [not for others], responding to and put forth through affective, symbolic, and material means, so as to (at least potentially) invite others to create new possibilities through entertaining propositions [not reattune or otherwise transform how others inhabit the world] that may inspire new ways of acting [not to an extent that calls for some action]." Rickert and I agree that enchantment ontology draws attention to how rhetoric and writing arise from affective entanglement in the world, but while he focuses on affective persuasion, I focus on a form of persuasion that creates new entities and new possibilities. Ambient rhetoric focuses on reattuning others in order to persuade them to inhabit the world differently, while enchanted writing focuses on how interlocutors create new meaningful entities through intra-action. Ambient rhetoric reattunes others as a call for action, while enchanted writing invites others to participate in creating new futures.

In line with this difference, I argue in chapter 6 for rethinking persuasion as a "polite modification of dreams," an action that "does not aim at awakening, leaving the cave. It is itself a dream, a storytelling: to learn 'inside' the Platonic cave, together with those who live and argue within it. Not in the hope that the false appearances will gradually yield their secrets, but in the hope that these 'appearances,' if they are appreciated in their affirmative importance, might be articulated into fabulous contrasts" (Stengers, TW 516). Storytelling, as I said earlier, offers a path for others to follow. It is polite in that it respects the differences of others "insofar as their habits constitute a world for them" (TW 517). Politeness is not to be confused with tolerance, as Stengers insists: "Civilized conversation, to speak with Richard Rorty" avoids serious conflict by indulging "in well-bred-that is, without consequence-language games," renouncing "everything that might compromise their belonging to the same world" (TW 513). Polite persuasion, instead, involves habits of paying attention and being open to the world in order to celebrate differences as contrasts that can inspire new ideas and ways of being in the world.

In the introduction I argued that writing well is making things that are meaningful to and have important effects on ourselves and others of all kinds. Writing well requires developing habits as active dispositions to pay due attention to the world, reaching out to grasp the world in a way that still lets beings and entities become through their own decisions. Good writing habits require attunement, an active prehension of other entities that enables writers to create and entertain propositions—"tales that might be told"—that are meaningful and matter to other entities. They are serial practices that innovate responses—written and otherwise—in the specific ecologies in which beings are entangled.

This understanding of habits departs rather a lot from the common usage of "habit" as Joe Sachs explains in the introduction to his translation of Aristotle's Nicomachean Ethics. He complains of the common translation of hexis as "habit": "Every implication of the English word is wrong" (xii), he says. "Habitual action need not be chosen knowingly, and it does not have a flexible constancy but a mindless uniformity . . . [it is] only a passive and mechanical response to a superficial sameness in outer circumstances" (xiii-xiv). Aristotle, he claims, is not talking about "habit-ethos in Greek-but character: êthos" (xiv). Aristotle does relate habit and character in this way: "Excellence in character comes into being as a consequence of habit, on account of which it even gets its name by small inflection from habit" (Nicomachean 21-22). Sachs cautions that by good character Aristotle does not mean "a set of socially approved habits," nor simply "a pre-existent natural capacity"-what is often conceived of as a person's true nature. The "crucial and necessary factor that brings a virtue into being . . . is the deliberate contribution of the person who comes to have it, the hexis" (Nicomachean 22n). Aristotle says, "The virtues come to be present neither by nature nor contrary to nature, but in us who are of such a nature to take them on, and to be brought to completion in them by means of habit" (Nicomachean 22). Sachs notes that Aristotle allows that "habituation has to work on a natural capacity already present" (Nicomachean 47n), but "we decisively determine the hexeis that come to be ourselves ... hexis ... [is] an active condition, a way in which we hold ourselves, having taken hold deliberately of the feelings and dispositions that are in us merely passively" (Nicomachean ix).

What Aristotle means by habit here—that it is a being at work—is apparent as he describes the process of bringing virtues to completion: "We do take on virtues by first being at work in them . . . people become, say housebuilders by building houses or harpists by playing the harp. So too, we become just by doing things that are just" (*Nicomachean* 22). Sachs notes that "being at work," *hexis*, derives from the verb *echein*, which means "to have something . . . or to be something in an enduring and active way," and thus *hexis* is "an active having-and-holding that depends upon the effort of concentrating or paying attention" (*Nicomachean* xii). He argues that Aristotle believes "that we are only open to the world" by being in an active state, "by the effort of holding ourselves ready" (*Nicomachean* xii).

When Kimmerer recognized the plantain on the trail, which she had not noticed when she passed this way earlier, as an "old friend," she was open to the world and actively paying attention. Her recognition was "not intellectual," not conscious, but it was active, a being-at work, an awareness of "an object of peculiar type with its own particular ingression into nature" (Whitehead, CN 155). As an indigenous woman and a botanist, she habitually holds herself ready to pay attention to particular entities in the world which she sees as her relatives: her "Grandmother Sitka," her "old friend" the plantain," and her "new neighbors-giant firs, sword ferns, and salal" (213). She names the plants she encounters, for "names are the way we humans build relationships" (208). Encountering plants who are strangers, she turns off her "science mind and names them with a Nanabozho mind . . . not *Picea sitchensis* but *strong* arms covered in moss" (208) in order to focus on "looking even closer" to see if she has "gotten it right," just as Nanabozho was instructed to "learn the names of all the beings . . . to discern their true names" (208). She recognizes the plantain with both her people's name for it, "White Man's Footstep," and its scientific name, Plantago major, both of which refer to its nomadic habit. The situation and the events surrounding the encounter between Kimmerer and the plantain also condition her felt recognition of the plantain as nonnative. Here in a Pacific Coast forest, both she and the plantain are strangers, immigrants like Nanabozho, who was "the last of all beings to be created" (205).¹²

The emergence of the plantain as an immigrant is an "outcome of the habit of experience," which is, Whitehead observes, common to all "complex living organisms" as a condition for their survival (CN 155–56). Habits of experience involve an active comportment toward the world, not a "a passive and mechanical response," but an awareness of something that matters in a particular way. Such an awareness is not necessarily conscious, though it is available to consciousness, and not dominantly cognitive but affective: it is, as I said, a felt recognition. Stengers instances a rabbit turning its head toward a noise as aware that the noise may have an important meaning and bolting when the noise is revealed as "a predator" (TW 31). She comments that a "habitual gesture" like this "does not 'lack' anything, but it is different from a conscious gesture" in that it "translates other urgencies [such as survival] than those, presupposing language, of having to account for what one 'means'" (TW 349). Habits of experience also are not mindlessly uniform but exhibit the flexible constancy that Sachs sees in *hexeis*. Stengers says "the goal is not to penetrate" the experiences of other human beings or animals "but to think on the basis of the 'habits' that enable us to say 'a rabbit' or 'a sociologist,' that is, to evoke a style of experience or adventure that is endowed with a certain stability" (TW 26). Kimmerer does not mindlessly register the presence of a plantain, but reaches out to grasp the ingression of a particular plantain into a specific experience located in a specific place and chain of events.

Habits of experience are wagers concerning the world; they testify to the existence of something in the world: "The existence of a mountain climber testifies to the fact that in general, the side of a mountain offers reliable footholds" (TW 88). The habit of mountain climbing depends on mountains being the kind of thing that offers footholds to humans, just as the habit of botanizing testifies to the existence of various plants with differing effects on other beings. Habits of experience validate perceptions of the world as direct experiences, not as representations constructed in the mind. Whitehead argues that recognition of objects is a "non-intellectual relation of sense-awareness which connects the mind with a factor of nature without passage" (CN 143). As Latour says, things-in-themselves are actually things that you reach. Whitehead does refer to this connection as a disclosure: "In sense perception nature is disclosed as a complex of entities whose mutual relations are expressible in thought without reference to mind" (CN 4-5). But as Stengers explains, he does not mean by it that the goal of paying due attention "is to experience something hidden, latent, and implicit, which would be more 'true,' in one way or another, than our usual perceptions" (TW 46). Instead, she says, for Whitehead, "The goal is never to go 'beyond' usual experience but to transform it, to make what usually 'goes without saying' matter" (TW 46). What matters does not precede the encounter; it is a new entity that emerges in the encounter.

Kimmerer's recognition of the plantain as an immigrant is a transformation of it into something that matters. As Whitehead says, "Recognition is that relation of mind to nature which provides the material for the intellectual activity" (CN 143). The encounter has produced what he calls a proposition. Propositions are not verbal statements, but rather are experienced, or entertained, as a feeling of a break in continuity. On seeing the plantain, which her focus on her "new neighbors" had prevented her from noticing before, Kimmerer says, "I am stopped in my tracks" (213). Whitehead says, "The primary mode of realization of a proposition in an actual entity is not by judgment, but by entertainment. A proposition is entertained when it is admitted into feeling. Horror, relief, purpose, are primarily feelings involving the entertainment

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of propositions" (PR 188). He emphasizes that entertainment of propositions results not in a change in the look and stand of an object, but a new entity: "When a non-conformal proposition is admitted into feeling . . . a novelty has emerged into creation . . . it is new, a new type of individual, and not merely a new intensity of feeling" (PR 187). Propositions are "tales that perhaps might be told about particular actualities" (PR 256). Stengers says, "As a lure—'what might be' said, or felt, about particular actual entities—[a proposition] raises a question" (TW 413).

Propositions are entertained not only by human beings but also by other beings, though, as with Heidegger, language does play a role in distinguishing how humans entertain propositions. Stengers explains that language does not enable humans to judge what is objectively true, "to manipulate the pros and cons" logically using descriptive statements; instead language elaborates propositions into a speculative adventure: "Speculative language should be able to induce not the reaction of a rabbit becoming aware that this grey shade is what we call a wolf, that it is a convinced 'it matters!' but a speculative adventure entailing questions such as 'how does it matter?' 'does it really matter?' 'what if I accepted that it does not matter?' 'how did it come to matter?' unrealized ideals then shaping our experiences" ("Whitehead's Account" 54). Rabbits entertain propositions as a feeling; they are aware of the event and its meaning, but they do not proceed to speculate about it. Speculation marks the entrance of conscious thought into the entertainment of propositions.

As she thinks about how the plantain matters, Kimmerer draws on other preceding events in her walk. She had been remembering that when Nanabozho arrived, he had "many paths to follow, made by all those whose home this already was" (206) and that they would be his teachers in ways "to become native to his new home" (207). But she notes that Nanabozho's instructions have been forgotten, and she asks, "What happens when we truly become native to place, when we finally make a home? What are the stories that lead the way?" (207). Comparing what she knows of the habits of plantain to those of other immigrants, both human colonizers and plant species from abroad, "that do not make themselves welcome on a new continent" (214), she realizes that plantain, by becoming "so well integrated," is now naturalized, just as are human immigrants when they become citizens. Her good habits of actively paying attention and of being open to the teachings of other entities in the world have led her to a speculative adventure that results in a new response. Casey Boyle observes that in the serial practice of habits "we do not withdraw a prior experience to fit with an event but are habituated by having had to resolve related events and become disposed toward composing fitting responses" (545). Habits arise in and are perpetuated and elaborated in ongoing experience.

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Good habits don't truly become a part of us, as Aristotle says, until they are put in action and become, well, habitual. Ingrained practices (or habits) are, as Whitehead says, "the way the mind reacts to the appropriate stimulus in the form of illustrative circumstances" (AE 27); they are responsive to the specifics of a situation and are thus material behaviors. Just as Aristotle argues that one must knowingly choose hexeis "being in a stable condition and not able to be moved all the way out of it" (26), William James argues that one acquires habits through ongoing attention and effort to convert feelings and dispositions into action: "A tendency to act only becomes effectively ingrained in us in proportion to the uninterrupted frequency with which the actions actually occur, and the brain 'grows' to their use" (125). He urges us to "Keep the faculty of effort alive in you by a little gratuitous exercise every day" (126). Sachs observes that for Aristotle, a "crucial necessary factor that brings a virtue into being . . . is the deliberate contribution of the person who comes to have it" (Nicomachean 22n). Aristotle thus distinguishes habits from feelings and predispositions; habits are actions, actions that are knowingly chosen and held to for their own sake (Nicomachean 26-28). This ongoing effort is as crucial in doing good writing as it is in bringing virtue into being. Good writers need to not only choose but also enact and hold to habits that create speculative adventures.

Whitehead introduces habits of experience to emphasize that senseawareness-"the red glow of the sunset"-is an intra-action within nature, not something distinct from what we know about nature—"the molecules and electric waves" that account for the phenomenon. Actively attending to the direct felt experience of the world enables humans to participate in "the creative advance" of nature (MT 151). His objection to "professional habits" was that by valuing abstractions over and to the exclusion of concrete facts, they obstructed creativity: "professionalised knowledge . . . produces minds in a groove . . . to be mentally in a groove is to live in contemplating a given set of abstractions. . . . Thus in the modern world, the celibacy of the medieval learned class has been replaced by a celibacy of the intellect which is divorced from the concrete contemplation of the complete facts" (SMW 197). He refers to a well-known rhyme about the Master of Trinity College, Cambridge-I am Master of this College / And what I know not / Is not knowledge-as an example of what leads to the "trick of evil" discussed earlier. "This attitude is always prevalent in the learned world. It sterilizes imaginative thought, and thereby blocks progress" (MT 43). Writing in the 1920s in Science and the Modern World and The Aims of Education, Whitehead was particularly concerned about how this attitude permeated educational practice and restricted social progress, arguing that the successes of rationalism in western European

thought had revealed limitations that "call for a renewed exercise of the creative imagination" (SMW 208).

He asserts that "the central problem of all education" is "the problem of keeping knowledge alive, of preventing it from becoming inert" (AE 5). What students most need to discover is that abstractions are useful only to the extent that they help one understand one's experience, "that stream of events which pours through . . . life" (AE 2). Utilizing an abstraction means "relating it to that stream, compounded of sense perceptions, feelings, hopes, desires, and of mental activities adjusting thought to thought, which forms our life," and when abstractions are not utilized in this way, they are "positively harmful" (AE 3). Stengers comments that this is how teaching "vivid" ideas differs from teaching "dead" ideas, "the former setting the students' minds in motion, and the latter being synonyms for indoctrination and passivity" (TW 141). Being at work, actively paying due attention to the concrete facts of experience, allows students to create new entities through entertaining propositions that set their minds in motion.

Boyle also argues that habits build up capacities for taking hold of situations, of responding to the world in ways that are useful. Repetition of practices, he argues, does not increase individuals' agency but rather their capacity, a term that, "with its etymological connections to taking hold," shifts "from abilities inherent to humans to the ecology of entanglements between entities" (Stormer and McGreavy 5; qtd. in Boyle 545).¹³ Boyle also suggests that serial practices thus imply an ethic: "A serial practice is not simply a choice of a particular style but is the adoption of a style of engagement, an ethic in developing capacities for becoming affected by others as much as affecting others" (548). Habits of paying due attention to events and entertaining propositions mark the adoption of this style of engagement. They are practices of *hexis*, an active having-and-holding that depends on paying attention and that through the effort of holding oneself ready enables one to be open to the world. This style of engagement suggests a kind of ethic that, as Boyle says, "does not impose moral ideas but works within a given situation to develop good practices" (548)—and, I would say, good habits of writing.

Stengers observes that Whitehead follows James in affirming both "the creator's trust and the power of habit": "Educators must trust the creative character of what they are charged with transmitting, and, although they are concerned with the difference between good and bad habits, they cannot denounce habit as such" (TW 139). Habits are built up of experiences that have succeeded in providing specific footholds and their importance must be respected: "Others' dreams, like yours, are created according to the means of their own adventure" (TW 518). New "good" habits do not drive out old "bad"

ones; instead they coexist, expanding the kinds of footholds in the world. Instancing physicists who judge a poet's description of a sunset as subjective, Stengers explains: "What is aimed at by an 'ethical modification,' in this case, is not 'modified' physicists, having become able to reconcile what has bifurcated. It is simply physicists capable of celebrating the adventure they inherit in its singularity, without turning the 'physical reality' of the electromagnetic waves emitted by the sun into 'the' objective version, in opposition to which all other versions must be defined . . . their 'ethics' remain indeed those of physicists.... They have 'simply' acquired the good habit of dreams that do not turn them into the thinking head of humanity" (TW 515-16). Thus when Kimmerer acquired the habits that made her a botanist, she was not required to nor did she relinquish the ethical habits that made her indigenous. Her habits were not contradictory but contrasting; both enabled her hold. She imagines Nanabozho and Linneaus walking together in a forest, discussing the names for things: "They're both so enthusiastic, pointing out the beautiful leaf shapes, the incomparable flowers . . . Linneaus lends Nanabozho his magnifying glass so he can see the tiny floral parts. Nanabozho gives Linneaus a song so he can see their spirits" (209). Stengers says, "The question is no longer of knowing 'who is right,' but of what each one of them has 'done' with the vivid experience that nourished them all" (TW 141).

The good habits of writing I offer in chapters 3, 5, and 7 are offered as ethical in this sense. They are habits of addressing difference, paying attention to differences, being open to them, accepting them as engendering propositions that can lead to new possibilities. They do not instruct writers in how to respond, just to accept the test constituted by the encounter with the other. Like virtues, they do value particular behaviors, or actions, but, like acting justly, they are very short on specifics. As with acting justly, there are some people who do not believe in the importance of paying attention to others, but I think it is difficult to find a society or culture that doesn't in some sense see it as a good thing.

I also offer these habits not as replacements but as supplements to other habits of good writing, such as those in the *Framework for Success in Postsecondary Writing*. I do, however, consider the habits I offer as crucial in doing writing that testifies to the importance of our intra-actions in an entangled world and to our accountability for how we respond. They are habits as *hexeis* that actively pay due attention to experience and mobilize possibilities by letting entities be what they are becoming and letting them show what they can do.