Writing and Rhetoric and/as Posthuman Practice

Casey Boyle

"We are habits, nothing but habits—the habit of saying 'I.' Perhaps, there is no more striking answer to the problem of the Self."

—Gilles Deleuze, *Empiricism and Subjectivity*

T he *Framework for Success in Postsecondary Writing*—a 2011 joint report outlining a general arc for preparing students for writing into and beyond college—is provocative in two related ways. First, the report assumes writing and writing instruction to be a continuous activity, positing that "[w]riting development takes place over time as students encounter different contexts, tasks, audiences, and purposes" (2). This claim is evident in that the report is itself a venture undertaken by three national education organizations that span several stages of writing instruction (Council of Writing Program Administrators, National Council of Teachers of English, and the National Writing Project). Second, the report proposes cultivating students' "habits of mind" as the essential task for educators, countering current pedagogical orientations that instead focus humanities education on developing conscious and critical attention. "Habits of mind," the *Framework* states, "refers to ways of approaching learning that are both intellectual and practical and that will support students' success in a variety of fields and disciplines" (1). The document identifies eight such habits that writing instruction should value and cultivate: curiosity, openness, engagement, creativity, persistence, responsibility, flexibility, and

Casey Boyle is an assistant professor in the Department of Rhetoric and Writing at the University of Texas at Austin, where he researches and teaches digital rhetoric, composition theory, and rhetorical history. His work has appeared in *Kairos*, *Philosophy and Rhetoric*, *Computers and Composition*, and *Technical Communication Quarterly*, as well as essay collections *Rhetoric and the Digital Humanities* and *Thinking with Bruno Latour in Rhetoric and Composition*. He is a managing editor of *enculturation: a journal of rhetoric, writing, and culture* as well as coeditor (with Scot Barnett) for the essay collection *Rhetoric, through Everyday Things*. Casey is currently completing *Rhetoric as a Posthuman Practice*, a book that explores practice and/as ethics in digital rhetoric. He has been a fairly consistent dues paying member of NCTE since 2008.

———————————————

metacognition. By characterizing writing and writing instruction as a continuous cultivation of habits, the *Framework* offers writing studies an occasion to reframe its practices for a time when always-on digital media and connected networks are upending our most deep-seated habits.

In a professional context, the report offers opportunity to revisit longstanding issues regarding preparation for college composition and materially influencing pedagogy at the local level. In fact, the report included and interested so many composition scholars that *College English* published a symposium (O'Neill, et al.) wherein scholars responded to the *Framework* by examining issues of articulation between high school and college (Severino); guidelines for discussing transitions (McComiskey); opportunity for extracurricular areas of assessment (Hansen); and an opening for engaging character (Sullivan). In another response, Kristine Johnson proposes that the *Framework* provides occasion for renewing classical *rhetorical education* in concert with the report's designed aims for writing studies and instruction. By positioning writing as a "way of being in the world," Johnson argues that the *Framework* isolates writing instruction to be an ideal site for shaping of ethical comportments though "ancient rhetoric and liberal arts" (519).

Johnson's central claim that the *Framework* offers possibility for renewing ancient rhetorical training is especially apt since, as noted, the report frames writing education as continuous and habitual, both key attributes of rhetorical training in antiquity. I further agree when Johnson argues for "positioning habits of mind *as practices*" and not as end goals in themselves (536, emphasis added). I pause, however, when Johnson and other responses position *metacognition* as central to rhetorical practice. Johnson connects metacognition with reflection, writing, "Beyond the seven other habits of mind outlined in the *Framework*, metacognition figures most prominently in our disciplinary landscape as reflection" and that, given the field's growing interest in transfer research, "the habit of metacognition will likely remain a significant area of disciplinary inquiry" (525).

When considering the moment to which *Framework* responds—a reconsideration of writing's central role in a humanities-based education—we could be falling back on outmoded habits by reemphasizing reflection as central to metacognition and practice. We might instead understand this moment as calling on us to respond differently by elaborating further on Johnson's rhetorical response to the *Framework*, connecting rhetoric to emerging appreciations for materiality and mediality. Responding to this moment, I am especially keen to explore practice similar to the orientation toward writing that Laura R. Micciche has characterized as "codependent with things, places, people, and all sorts of others" (501). If writing and writers are codependent *with* things and all sorts of others, then metacognition and reflective practice (both entrenched in humanist notions of a literate self) have the potential to become bad habits, since each reflective exercise persuades a writer to separate herself from all those things with which she is codependent.

To extend Johnson's rhetorical response to the *Framework*, I propose that its interest in writing as a "*way of being in the world*" offers an occasion to reframe rhetorical practice. So, this project looks to "productively read" (Muckelbauer) the *Framework* to reframe rhetoric's current habit of humanist, reflective practice toward what I will call *posthuman practice*. Posthuman practice unfolds not through the traditional conception of rhetoric as critical reflection about an object but as an ongoing series of mediated encounters. My plan for supporting this proposition is as follows. First, I sketch how reflective practice has become synonymous with rhetoric, giving rise to what I call *current-critical rhetoric*. Second, in response to a humanist orientation to media, I (re)introduce posthumanism as a frame for considering rhetorical training in an age of constant connections to digital media and networks. Third, I propose serial practice as a reinvention of rhetoric's habit of reflective, critical awareness that unfolds through repeated material perceptions I conclude by reconsidering meta-cognition and its implications for how reframing rhetoric as a posthuman practice could affect writing pedagogy and ethics.

Practice Makes Perfect

Composition has a long tradition honing reflective practice as rhetoric's primary mechanism and pedagogical goal. To start, perhaps the most explicit appeal to reflective practice and its ties to critical analysis emerge from Donald Schön's *The Reflective Practitioner*, which connects professional knowledge and technical skill acquisition with a person's ability to situate oneself in and among technical knowledge. Schön's work finds its way into composition studies most notably through George Hillocks's *Teaching Writing as Reflective Practice*, where the latter project extols that "reflective practice becomes inquiry . . . as it becomes more formal and systematic" (31). As noted previously, Kristine Johnson's response to the *Framework* surveys the field's scholarship and situates reflection at the center of what we consider to be rhetorical practice. Johnson includes Kathleen Blake Yancey's pedagogical claim that "[t]hrough reflection, [students] can assign causality, they can see multiple perspectives, they can invoke multiple contexts" (Yancey, qtd in Johnson 525). Yancey derives a pedagogical structure from reflection's role in rhetorical practice and outlines that dynamic as including three processes: goal-setting, revisiting and refining; text-revising in light of introspection; and articulating what has taken place (6). Current use of the concept also permeates "writing about writing" approaches as well as most scholarship studying "transfer" (Downs & Wardle, 2007; Nowacek, 2011). The importance of reflection to these pedagogies is apparent in that what students reflect about is not just writing processes but also the content of writing scholarship to help facilitate knowledge transfer from one setting to the next.

Reflection's central role in current rhetorical practices is echoed by recent studies about "deliberate practice" in sports, music, and medicine further codify reflection as the chief mechanism for skill development (Ericsson, Krampe, & Tesch-Römer). Some popularized accounts of deliberate practice go so far as to attribute a number of hours of deliberate practice needed to acquire expert level facility, or what has become known as the 10,000-hour rule (Gladwell). Like the dynamics of deliberate practice, reflective practice in rhetoric assumes that a practitioner focus conscious attention on an object or a set of tasks as a way to build her metacognitive ability. To wit, even when considering the word in its common etymological understandings, the prefix "meta" attached to "cognition" frames metacognitive activities as being "about" cognition. Such a formulation relies on the critical separation between thought and action, a knower and the known. The final section will explore other possibilities for this word but, for now, I advance the claim that through these metacognitive approaches, rhetoric becomes synonymous with critical engagement.

The way rhetoric assumed its current, critical orientation seems understandable since prior forms of practice are eventually understood as limiting rhetoric's circulation from entering into wider social or cultural activities. What many often refer to as "current-traditional rhetoric" (derived from George Campbell, Richard Whately, and Joseph Priestley) proceeded according to a model of rhetorical training that privileged an extreme form of practice. Current-traditional rhetoric (CTR) pedagogy used repetitive formal writing tasks to routinely train an individual's cognitive abilities. These pedagogical encounters stressed form over function to shape an interior mind, trusting outright an individual's ability to examine one's own mental process and reenact successful logical sequences for later application. Sharon Crowley refers to this "methodical" pedagogy as relying on "metaphysics" as a "first-principles approach," and these, according to Crowley, are "an inappropriate starting point for writing instruction" (14). Instead, Crowley proposes, "instruction must draw its inspiration from rhetoric, which always prefers the celebration of different to the repetition of the same" (14). She locates the repetition in a range of expository exercises whereby a current-traditionalist would deploy an "expository theme defined writing as a repetition of the reasoning that had gone before the production of the discourse—a repetition of the writer's metal process, a repetition of knowledge already derived, a repetition of method, a representation of reason itself" (163). For Crowley, and many others, CTR stressed the mechanical repetition of abstracted principles at the expense of a student's authority to participate in *meaningful* discourse. Despite how much CTR pedagogy was lamented, its "practice makes perfect" routine in rhetorical education became a productive opposition for rhetoric as an academic discipline that incorporated social and political critique. As a discipline, then, we reshaped our identity as "rhetorical" at the expense of one of rhetoric's earliest activities, *exercise*.

It's easy to see how rhetoric became focused on a broad notion of social critique oriented by numerous cultural studies approaches. We witness again, in Crowley's text, an emphasis on rhetoric as a framework for facilitating human agency within social relationships in a democratic culture. Rhetoric outside of "cultures that do not allow for the free exchange of discourse" according to Crowley means that "rhetoric is quite literally cut free from its obligations to be persuasive and is reduced to technique, play, or display" (169). Crowley sides here with many throughout rhetorical history who defend rhetoric as a substantial practice over rhetoric whose primary interest might reside only in language's formal qualities. Arguing against rhetoric as mere formal exercise, Crowley joins many others who position rhetoric as the site for developing one's agency to participate in a society of "free exchange of discourse." Thus, in response to the specter of CTR, the field created a critical rhetoric based in reflective practice, a form of rhetoric I loosely call *current-critical rhetoric* (CCR).

In contrast to CTR's focus on formal exercises, CCR bases its operations on reflective practice as a means to identify and negotiate social and cultural relations primarily as a way of increasing one's agency to negotiate human subjectivity and power. For example, a model CCR assignment in some classrooms takes the form of the op-ed letter as a practice in demonstrating one's facility to identify and assess a problem and then take a public position in response. While many rejoinders have attempted to loosen rhetoric away from being exclusively coupled with activities of democratic citizenship and activism seen in the op-ed letter and related forms (e.g., Hairston, 1993; Micciche, 2004, Wan, 2011), few do so by articulating a distinction between critical engagement and reflective practice.

In one notable exception, Joseph Harris argues that the discipline should prioritize rendering visible the practiced labor of writing over training students to develop an explicit political consciousness. Toward this end, Harris separates "critical reflection" from what he calls "critical consciousness." Harris locates the latter in the explicitly politically oriented projects of Paulo Freire and others (we might also include Crowley). Writing that "[t]he problem with teaching toward civic virtue or critical consciousness is that it is as vague a project as it is ambitious," Harris advocates for us to "ground our teaching on the more materialist approach" and turns to practice as defined by Sylvia Scribner where "'[p]ractice is used here to denote a recurrent set of goal-directed activities with some common object, carried out with a particular technology and involving the application of particular knowledge" (qtd. in Harris 591).

Harris's attempt to uncouple critical consciousness from critical practice relies on rethinking practice itself, but those efforts re-entrench practice in a humanist orientation to rhetoric and writing. Put differently, just as critical consciousness seeks to practice one's subject position, so does critical reflection hone a knower-known relationship to a variety of objects. Despite the careful attempt to parse the critical

practice from critical consciousness and attend to practice's materiality, reflection remains the underlying dynamic upon which both critical practice and critical consciousness operate. Rhetoric in this vein ultimately reinforces a humanist orientation as it focuses on developing one's ability to articulate decisions through increasing an individual's agency. An example of this orientation emerges in the frequently assigned reflective letter assignment in multimodal writing classes. Not unlike the op-ed model, this assignment compels a student to assess and explain choices made composing multimodal texts. Such an assignment is often viewed as evidence for a student's rhetorical sensibilities, emphasizing one's agency in choosing appropriate responses. Here, reflective practice in rhetoric, especially in multimodal pedagogies, unfolds as a student reflects through a successive process of being more aware of an object's dynamics. The "object" is used loosely as it might be a multimodal essay, digital interface, institution's infrastructure, or democratic debate. In each example, practice functions as a way to hone one's relationship to an external object by becoming reflectively aware of its affordances and constraints.

Whatever that subject or object might be, rhetoric as a reflective practice retrenches itself *as* a practice for dividing subjects and objects. Speaking toward this division, Robert Yagelski argues that our adherence to humanist orientations privilege and sustain a sense of a distinct self demonstrated by our writing practices. Yagelski claims this privileging occurs through a critical regimen of reflective practices that exacerbates our dispositions as subjects empowered to control an objective world. "Writing becomes a practice of the fundamental Cartesian subject-object binary and an expression of the autonomous Cartesian self as knower" (24). Yagelski posits that critical pedagogy, or what I term CCR, contributes to a "crisis of sustainability" that we find in environmental and social problems. This ecological crisis is, in part, created and sustained because "in school we teach separateness rather than interconnectedness; we see a world defined by duality rather than unity" (17). Yagelski goes on to further explain that "writing is an ontological act: When we write, we enact a sense of ourselves as beings in the world. . . . when writing is practiced as an act of being, it opens up possibilities" that are "undermined by conventional writing instruction" (24). For Yagelski, then, writing is both a problem and a possibility, not only something that sustains reflections of a prior self, but a practice that enacts a self (cf. Foucault 1997; Rotman 2008).

In a slightly different register, Peter Sloterdijk offers a similar position, arguing that humanism is beholden to a certain literary form, the epistle or the letter to a friend ("Rules"). The epistle, Sloterdijk argues, proves its writer to be a literate and cultured member of a Western society as the chief practice one engages to avoid the barbarism of the arena or crowd (16). However, the epistle, Sloterdijk claims, is no longer our model literary practice in an era of multiple media and of advanced sociotechnical systems. In place of the letter writer, Sloterdijk suggests the archivist

as the model figure for today's abundant and overwhelming media ecologies. I'll return to the archivist, but we might quickly note that a shift from the letter writer to the archivist would also effect changes in the product of such writing practices, from the consolidated whole we find in a letter (seen in an op-ed or a reflective letter) toward more distributed, less narrative media products such as a database, a program script, and social media networks.

Just as writing framed through CCR and the letter has helped us instantiate a humanist sense of being closely tied to Cartesian orientation of duality of being (subject/object), writing—especially the new media and networked writing targeted by the *Framework*—also offers possibilities to transform those habits of being toward an ecological orientation. Yagelski's concept of writing as an art of being connected leads him to propose that "we will have to teach in ways that foster a sense of self as fundamentally interconnected to all other selves and the landscape we inhabit" (20). Here, Yagelski indirectly echoes Marilyn Cooper's claim that "systems of writing are not just analogous to ecological systems but are driven by the same principles" (16). Cooper further extends sentiments also expressed by Yagelski and others when claiming that "writing is not a matter of autonomously intended action on the world, but more like monitoring, nudging, adapting, adjusting—in short, responding to the world" and, further, posits that "writing is an embodied interaction with other beings and our environments" (18).

Speaking to this ecological orientation, Rivers and Weber posit that rhetoric would benefit from "an expanded scope that views rhetorical action as emergent and enacted through a complex ecology of texts, writers, readers, institutions, objects, and history" (188). When recast as archival or ecological, rhetorical practice becomes a practice less concerned about conscious awareness of being embedded and more concerned with inventing techniques, many of which operate on nonconscious levels with which we exercise that embeddedness.

When rhetoric emphasizes reflective practice, we renew our dependence on humanist ideals, further contributing to what Yagelski calls a "crisis of sustainability." The *Framework*'s goals of developing habits that include practicing other "ways of being" lead us to a writing not only as a *way of being* but as a *way of becoming*. In the next section, I identify that *way of becoming* explicitly as posthuman practice.

Practice Makes Practice

Our past is replete with the proclamations that a posthuman future sits at the horizon. In fact, posthuman claims extend farther than just the recent past. Humanist notions of the human have been on the wane since (at least) Nietzsche speculated against the essential nature of the human subject or when Foucault wrote that "man is only a recent invention, a figure not yet two centuries old, a new wrinkle in our

knowledge, and that he will disappear again as soon as that knowledge has discovered a new form" (*Order of Things* XXV). We might even read farther back to the philosopher Baruch Spinoza, whose radical rethinking of divinity as one substance with an infinite number of attributes provides the earliest alternative to the rational secular humanist orientation. This quick sketch is not an attempt to locate an origin as much as it seeks to offer some context for the recent wave of writers who have rekindled posthumanism.

Recent enactments of the "posthuman" and its variants "posthumanist" and "posthumanism" should not be confused with "after the human" but, instead, as "after humanism" or, perhaps "among humanism." I use the term(s) to loosely organize a disparate conversation underway involving a wide variety of discourses, some of which are not properly considered posthumanist. Many scholars resist appeals to posthumanism over concerns that human problems are ignored when we turn our attention to nonhumans as having equal ontological status (e.g., Scott and Welch). In contrast, we might refer back to Hayles's contention that "the posthuman does not really mean the end of humanity. It signals instead the end of a certain conception of the human" (286). Indeed, recent posthuman accounts generally do not diminish the significance of the human but, as Cary Wolfe states, "actually enable us to describe the human and its characteristic modes of communication, interaction, meaning, social significations, and affective investments with *greater* specificity once we have removed meaning from the ontologically closed domain of consciousness, reason, reflection, and so on" (xxv).

More pressingly, Rosi Braidotti proposes, posthumanism offers an opportunity to "reinvent the academic field of the Humanities" through "affirmation, not nostalgia . . . not the idealization of philosophical meta-discourse, but the more pragmatic task of self-transformation through humble experimentation" (150). I turn then to posthumanism for reconsidering rhetorical training as an orchestration of ecological relations and not simply as a method for increasing an individual's agency. Adopting the ecological orientation that we find in posthumanism and related work, Erin Manning claims, "To engage the field of relation as an ecology where knowledge occurs, to place knowledge outside the register of existing knower-known relations, allows us to consider the importance of what escapes that register" (52). My aim is to reconsider rhetoric's training regimen outside that knower-known register and, following Braidotti, reframe our practice as a "pragmatic task of self-transformation."

Rhetoric has had its fair share of posthumanist moments. Writing over a decade ago, John Muckelbauer and Debra Hawhee argue that posthumanism compels us to engage "humans as distributed processes rather than as discrete entities" and that, in an age of posthumanism "rhetoric becomes an art of connectivity and thereby asks for new considerations from multiple angles-those that engage literature, science, critical theory, argumentation, cultural studies, et cetera (with emphasis on the

'et cetera')" (770). Such connectivity is an important consideration for recent curricular efforts such as the *Framework* to respond to new media, digital networks, and infrastructural interventions as activities with which rhetoric need be concerned. Andrew Mara and Byron Hawk add nearly a decade later that "[i]f we want to take these interspecies and intermaterial dependencies seriously" many of which I argue are implicit in the *Framework* and explicit in Yagelski's accounts, "posthumanism's focus upon the complex interactions of human and nonhuman actors, can help researchers avoid either overvaluing the human (humanism) or the nonhuman (antihumanism)" (2). Most recently, Sidney Dobrin claims posthumanism "identifies a moment of inquiry in which the human subject is called into question via its imbrications with technologies such as cybernetics, informatics, artificial intelligence, genetic manipulation, psychotropic and other pharmaceuticals, and other bio-technologies, as well as species interactions" (3). The key for a posthumanist rhetoric, to summarize these brief accounts, is an acknowledgment of a kind of *betweenness* among what was previously considered the human and nonhuman. Such a *betweenness*, it is important to note, is irreducible to supplement or prosthesis that had been emphasized in early cyborg-inflected critical theory. For rhetoric, a posthumanist orientation helps lead to an ecological or an "ambient rhetoric" that Thomas Rickert (2013) argues is "inseparable from considerations of emergence" (xiv).

Posthumanism aids in rethinking practice as ecological, irreducible to an individual's agency. As networked media help facilitate and generate more of our interactions, we are becoming more practiced in a *betweenness* and more sensitive to being in relation to an innumerable number of technological systems. While not in a posthumanist frame, Louise Wetherbee Phelps posits that "[t]here is an ethic of radical individualism" as it pertains to teaching and practical knowledge (866). Phelps's project concerns bridging the practical with the theoretical and scholarly by arguing for praxis and *phronesis* as "the exercise of practical intelligence to take right action in particular cases" (864). Using *phronesis*, Phelps builds directly on Donald Schön's reflective practice, citing his example of an architect who wrote about practice as generating "'a [cognitive] repertoire of examples, images, understandings, and actions. His repertoire ranges across the design domains. It includes sites he has seen, buildings he has known, design problems he has encountered, and solutions he has devised'" (Schön qtd. in Phelps. 870–1). The example serves as an analog for how a community develops a base of accumulated practical knowledge and innovates that base with new theoretical assumptions. It is important to note that Phelps is not typically understood as a posthumanist thinker, but the problem she engages certainly is. Phelps's project is an early attempt to reconsider practice's value in a scholarly community but, ultimately, Phelps responds to what I consider to be a posthumanist problem with a set of postmodernist tools. Her larger project connects to postmodern thought—notably Hans-Georg Gadamer—and ultimately

examines interpretation and individual judgment to conduct practice and/as *phronesis*. The next section explores the larger problem as a focus on individual agency but, for now, Phelps's appropriation of practice is productive *because* it valued procedural constraint—often pejoratively regarded in the humanities—an important development for how situated, practical knowledge should be widely valued. Posthumanist thought can activate Phelps's project anew.

The *Framework* discusses "openness" as a key habit of mind, defining it as "the willingness to consider new ways of being and thinking in the world" (4). As it prescribes a need to experience "new ways of being," the *Framework* implicitly characterizes "being in the world" as multiple, all-involving different sets of "procedural constraints." These constraints facilitate but also emerge and are reshaped with repeated practice. We can turn here to Isabelle Stengers, who argues in "Introductory Notes on an Ecology of Practices" that knowledge emerges as an ecology of practice, which is "a tool for thinking through what is happening, a tool is never neutral" (185). Stengers stipulates that "an ecology of practices does not have any ambition to describe things 'as they are' . . . It aims at the construction of new 'practical identities' for practices . . . new possibilities . . . not approach practices as they are . . . but as they may become" (186). Stengers concludes that while she began to think about practice as a tool, "the tool, as it is not an instrument to be used at will, co-produces the thinker" (196). A chief tenet then for a posthuman practice is that that any *individual* (be it a human or nonhuman) is not an essential subject or object compelled to adapt to external factors, but that individuals emerge *from* and *with* and *as* practice. Such practices, seen throughout the accounts above, emerge from particular situations, distributed across a variety of material relationships, and are temporally contingent. To put it simply, *practice makes practice*.

If practice makes practice, as Stengers and posthumanists claim, then it should follow that nonhumans contribute to and benefit from exercise as much human actors. Responding to what he calls an overly humanist notion of social theory, Andrew Pickering explores practice by examining sites of technological invention to show how subject and object are weak categories for understanding how we practice. For Pickering, we need to unmoor practice from humanist notions of "desires, interests, rules, knowledge, social structure" as those are decidedly based in subject and object distinctions where practice actually unfolds in an otherwise "mangled" assemblage (172). Pickering argues that the only "reliable and enduring feature of practice that I can discern is the pattern that I have so far called tuning," which is a process that emerges from the "reciprocal tuning of people and things" (172). Pickering offers an example of "tuning" in a case where medical researchers and a medical test (e.g., Wasserman reaction) work together resulting in a "mutual tuning of material procedures and human agents" (173). Responding to this reciprocity, Pickering goes on to claim that "we need a *posthumanist* social theory: one that recognizes from the

start that the contours of material and human agency reciprocally constitute one another" (173). A social theory along these lines

> means that an adequate social theory can amount, at most, to a set of sensitivities in our encounter with empirical phenomena: we should especially look out for post humanist interlinings of the human and the nonhuman—the construction of subjects for objects, as well as vice versa—and we should recognize that in general nothing substantive endures in the encounter of material and human agency. (173)

Pickering stresses that this sensitivity should be valued as knowledge but "should be seen as *within the plane of practice;* continually emerging from and returning to enduring sites of encounter of material and human agency" (175). That is, practice *is* theoretical but does not claim privileged insight. Theory is a practice; at the very least, it is a practice of theory. As such, theory is continuous with and not separate from the mediation of material ecologies. For example, Pickering offers another example of tuning in the invention of the train as an object that creates a subject for "panoramic seeing" (cf. Schivelbusch 1986). The sight offered by a train does not offered privileged insight but does offer a different way of being in the world, one that continues to be exercised even after the ride ends. In a related example, we might be exercising a similar posthuman practice with the rise of aerial photography drones, tuning into a "landscape vision" that contributes another materially informed way of seeing (*theoria*) or another way of being in the world.

Not unlike Phelps, Pickering stresses the importance of linking theory with practice, but Pickering concludes his project in "puzzlement" about easy distinctions between theory and practice, mind and body. Unlike many who find theory and practice to form a dialectical relationship, Pickering is less certain. The latter appreciates how discontinuity and nonlinearity are characteristic of a posthuman practice and is ultimately confused by how central a role that homeostasis plays for some posthumanist orientations. In reference to "homeostasis" as "arising from reflections upon the stability of biological organisms in the face of varying environments," he asks, "Does it point to some blind spot in current studies of practice?" (180). At issue here, given how Pickering characterizes practice as an ongoing tuning, is how a reflective activity could operate given the instability and discontinuity of subject and object. We might find resonance here in Pierre Bourdieu's notion of *habitus* as "systems of durable, transposable dispositions" and as "structured structures predisposed to function as structuring structures" that are "collectively orchestrated without being the product of the orchestrating action of a conductor" (72). Echoing Pickering perhaps more than Bourdieu, Nigel Thrift is also interested in how practice orchestrates bodies wherein "[t]hese material bodies are continually being rewritten as unusual circumstances arise, and new bodies are continually making an entrance." and "[p]ractices are productive concatenations that have been

constructed out of all manner of resources and which provide the basic intelligibility of the world: they are not therefore the properties of actors but of the practices themselves" (8). In an interview with Michel Foucault, Gilles Deleuze explicitly recasts this relationship, positing, "Possibly we're in the process of experiencing a new relationship between theory and practice. . . . Practice is a set of relays from one theoretical point to another, and theory is a relay from one practice to another" (qtd. in Foucault, *Language* 205–6). What is intriguing about Deleuze's vital approach to practice and theory—when read alongside Pickering's and Thrift's material accounts of bodies and/as concepts—is the extent to which terms like *application*, *abstraction*, or *representation* become less productive. In this "new relationship" between theory and practice, we forgo opposing subjects against objects and enter into a continuous relationship between theory and practice.

Understanding practice as a continuous activity that includes the nonhuman is important because, in addition to the *Framework*'s identification of habits crucial for twenty-first-century writing, the report identifies ways to foster those habits by encouraging "experiences with reading, writing and critical analysis" (6). Among these experiences, the report lists rhetorical knowledge, critical thinking, writing processes, and *writing in multiple environments*. While many of these overlap, the latter is of immediate interest for posthuman practice. The *Framework* defines this as "refer[ring] to the ability to create writing using everything from traditional pen and paper to electronic technologies" (1). Each of these multiple environments offers occasions for "tuning" not only a writer to an ecology of media but to help tune that ecology as well. For example, Devoss, Cushman, and Grabill (2005) show how students' classroom practices helped rewrite institutional policies and affect infrastructure.

It is important to note, however, that this posthuman practice of tuning is often not as visible as rewriting institutional policy, nor should it be. A posthuman practice, following Stengers, Pickering, Thrift, and Deleuze, involves an ongoing "mangle" of relations that incorporate as a material body. In addition to the reflective letter or reasoned position statement, there is much pedagogical possibility in practicing *within* multiple composing environments (cell networks, intranets, mesh networks). Such practice would avoid an ultimate aim to become critically aware of institutional and infrastructural dynamics but instead would aim to use practice's repetitions to become attuned to and help foster the repetitions, rhythms, and relays that emerge across different media ecologies of which we also emerge. In some senses, the practice of composition in the traditional understanding (writing and signification) is itself a practice in composition in the larger sense (bodies in relation). Practice, then, needs new terms for encountering its *ways of becoming* that are not reducible to a humanist orientation's dependence on reflection.

Practice Makes Perception

Let's repeat the basics. Practice, traditionally defined, is a set of tasks one repeatedly undertakes to acquire or improve a skill. More broadly, practices are also defined as the historically situated dynamics in which an activity unfolds (sociocultural phenomena). A posthuman practice collapses those two definitions and understands all activity as, to slightly adapt Theodore Schatzki, *an embodied, materially mediated array of activity*. Current practice approaches emphasize critical, reflective activity for both versions of practice defined here. In *current-critical rhetoric*, a rhetor's effectivity relies on one's agency, an ability to consciously situate and negotiate one's actions among a variety of social relationships. Since posthumanism seeks to avoid strict separations between knower and known, practice must rely less on reflection as its central mechanism. My task then turns to de-emphasizing reflection, since reflection and its sibling, feedback, amplify one way of being above all others. In this section, I wish to recast reflection's role and argue for practice to be understood as a *serial* activity.

Less important for a posthumanist account is how an individual's agency, as evidence of a consolidated and intentional agent, is developed and sustained. This is not to say that necessary political action cannot be undertaken; rather, agency that relies on an individual's or a group of individuals' critical abilities can only ever be a partial and perhaps even dangerous approach to problems confronting a wider ecology. How we account for practice as an exercise of an ecology's tendencies is vital for how increasing capacities for those ecologies. In *Composing Agency: Theorizing the Readiness Potentials of Literacy Practices*, Clay Walker stages an argument very similar to my own. Walker identifies the "practice of practices" as a way to develop "discursive readiness potential," or the "range of possible actions available to an agent in a discursive situation, as well as the range of possible actions that may not be felt as immediately available to one due to the contours of the situation" (14). Walker defines the skills developed through the experience of practice and the ability to draw from those experiences as one's agency. He goes on to define agency as "a fluctuating sense of one's capacity to affect others and be affected that emerges from one's current goals, emotions, perceptions, ongoing recollections of memories, and dispositions within feedback and feedforward loops between ourselves and the world in which we act" (9). At its core, Walker's *discursive readiness potential* relies on conscious reflection through "repeated practice of discrete literate practices and self-aware feedback loops between writer, the writer's writing body, and the world may cultivate greater likelihoods for doing similar actions in emergent context-rich social situations" (15). Unlike Crowley from the first section, Walker emphasizes repetition as productive for learning; however, like deliberate practice or critical practice, reflection is once again practice's central mechanism.

While Walker explores inventive potentials of *mere* practice, exercises long thought to be antirhetorical, the project's focus on agency returns practice to an all-too-humanist frame for rhetoric. Despite its affinity with new materialist methods, the project's focus on reflection and judgment is dependent on an individual's conscious awareness to adjudicate *discourse readiness potential*. Walker's conflation of agency with capacity works against reconsidering practice away from its current humanist confines. I base this claim on Nathan Stormer and Bridie McGreavy's proposal for orienting to an ecological rhetoric by replacing *agency* with *capacity*. By enacting a shift from agency to capacity, they move "from abilities inherent to humans to the ecology of entanglements between entities" (n.p.). Further, they state that "[a]gency identifies force by its application where capacity imagines force in its relations" (n.p.). Such a shift would allow practice to operate in a posthumanist frame since emphasizing capacity—and its etymological connections to taking hold—would connect an ecological orientation to practice with recent findings in distributed cognition (more on this in the final section).

Walker's project offers a great opportunity to consider how practice accumulates prior experience—especially as that experience relates to particular writing genre—as an ongoing activity of mediation. As such, the project echoes recent cognitive psychology research explaining how technological advancements both influence and also provide the tools for measuring that behavior. Most notably, *discourse readiness potential* helps to describe how practices become a kind of "database of experience." In fact, writing in a more popular vein, sportswriter David Epstein articulates just such a concept. Examining elite athletic performance, Epstein argues that the repetitions involved in any regimen of practice actually equip the practitioner with a database of experience from which the athlete would unconsciously "chunk" items in a field as a way to ascertain larger patterns of movements. This *database* then serves as a resource from which to draw for connecting a millisecond gap between a phenomenon and the experience of that phenomenon. William Connolly, a critical and political theorist, claims that developed *techniques* help account for how we respond to this half-second perception gap. These techniques are "composed through the cultural layering of affect into the materiality of thought" (106) and techniques are "micropolitical," involving tensions between people, genres, media, thought, action, and any number of relations that emerge in daily life. As these relations accumulate within an ecology, each of which are rife with nonconscious tensions, we continually work to resolve differences between techniques in any given set of tendencies, building up capacities of response for future engagements. 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.

The mechanisms of reflective or deliberate practice crucial for developing metacognition are not as applicable in a posthumanist orientation. As we orient ourselves

toward an ecological, archivist, or posthuman notion of practice, we stand to benefit by rethinking the body, the site for practice, as an expansive ecology. Brian Massumi (2002) offers a noninstrumental account for how this practicing body might develop:

> For Spinoza, the body was one with its transitions. Each transition is accompanied by a variation in capacity: a change in which powers to affect and be affected are addressable by a next event and how readily addressable they are-or to what degree they arc present as futurities. (*Parables* 15)

It is not that a body practices using a tool/object/task but that an event of practice occurs, exercising an ecology's tendencies and develops, over time, further capacities for that ecology. "Practice," Massumi writes "becomes perception" (30). However, this perception is irreducible to conscious, human knowledge. Working from Alfred Whitehead, Massumi later explains "perception as 'taking account,'" which means "an event inflecting the arc of its becoming as a function of its feeling the influence of other events . . ." (*Semblance* 26). Massumi goes on to explain that perception should not be linked only to human activity since, for example, an electron perceives or "takes account" of an electromagnetic field in its movements or that trees perceive or "take account" of their surrounding terrains by the ways they gather water and sunshine. These nonhumans, like humans too, "*are* perceptions in themselves: they *are* how they take account, in their own self-formative activity" (26, emphasis in original). Reflection, then, might be considered but one subset of a larger field that is perception.

While earlier rhetoricians sought practice as a way to harmonize interior cognition with exterior form, the question of interior/exterior, especially as it involves a posthuman account of a body, is less applicable than the relations a body composes. For example, consider how Bruno Latour discusses the "body problem." Instead of a body that is located prior to a practice, Latour proposes that a body be understood as "*an interface that becomes more and more describable as it learns to be affected by more and more elements*" (206, emphasis in original). He offers the example of how a perfume specialist "acquires" a nose through practice interacting with an aroma training kit. Now, it seems odd to discuss acquiring a nose, a biological feature with which a typical human comes equipped, but Latour argues, "[B]ody parts are progressively acquired at the same time as 'world counter-parts' are being registered in a new way. Acquiring a body is thus a progressive enterprise that produces at once a sensory medium and a sensitive world" (207). Not unlike Pickering's understanding of tuning, Latour finds practice to be generative for set of sensitivities. This process composes a repeated, ongoing encounter between a disparate array of things, a process not governed by reflective, conscious attention. The latter process would operate by honing and gaining greater clarity of one's position in relation to an exterior object (or skill). Latour argues, "On the contrary the more contrasts you add, the more

differences and mediations you become sensible to" (211). Practice, following Latour and Pickering, is a process of developing sense-abilities.

We find an analogous account for the process of practice in writing scholarship. In "(Meta)Physical Graffiti," Jenny Edbauer remarks that for a writing body "[affect] is the experience generated by relations—by your body-in-relation" (142). She proposes that affective literacy, one that a posthuman practice aims to exercise, involves understanding that "when we encounter writing, it not only signifies something *to* us, but it also combines *with* us in a degree of affectivity. Writing, in other words, involves a mutuality between sensual and signifying effects" (151). Writing consists of both signifying and asignifying affects. For instance, a writer composing a text message to a friend is not just one human connected to another at a distance by two devices. Instead, this ecology becomes *in-formed as* a *writing body* composed of tendencies among telecommunication infrastructures, languages, human bodies, labor practices, and an innumerable number of other affects. When writing is considered as *writing body*, Edbauer's turn to Spinoza, following Massumi and Latour, is apt since the recent responses to emerging media as becoming functionally continuous with our own biological bodies. Spinoza's central tenet that "we don't know what a body can do," favors experimental practice or, as Braidotti points out in the previous section a "pragmatic task of self-transformation." Reframed as a posthuman practice, rhetoric can be understood as the exercise of an ecology's tendencies to produce greater capacities within any given ecology. When we register an affect or register being affected, we perceive and through perception increase capacities to affect and be affected.

Practice is the repetitive production of difference even if that difference looks, to our conscious awareness, the same. When we repeatedly undertake the *same* task, we introduce differences simply by adding another version. The difference is perceived and affirmed within an ecology, and relations within that ecology become activated in new ways. Perceiving practice need not be a conscious event, though it sometimes is, nor need it be a human event, though it often is; but practice relies on perception to perpetuate itself. In lieu of understanding practice as reflective, I propose understanding it as *serial*. A series is composed of items that are continuous with but also distinct from one another without being separate. Each item in a series is a part of, but also apart from, any definite linear logic that might be imposed onto an overall series. For instance, I have adopted a serial arrangement for this project, an arrangement less oriented to the coherent letter and more toward the overwhelming archive or database. To affirm and embrace rhetoric's "lack of an object," I choose to not focus on a stable object of analysis for the essay. Instead, I marshal an abundance of sources that perform similar work without being reflective on one another. For instance, there are no less than three major works this article engages that claim *ecologies of practice* as an operative term. Not one of these works refers to any of the

others, but each offers a repetition in a different way. Each comes after the other but all are assembled together. I agree with Geoffrey Sirc, who proposes that "[a] serial composition of short, staccato bursts seems essential as a compositional strategy for our age" (70), but I also radically expand seriality as the composing process for the very writing bodies through which we write. 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.

This final turn to ethics, via perception and style, motivating serial practice turns us to an important topic in Kristine Johnson's rhetorical response to the *Framework*, most notably, in her discussion of the many problems that emerge when rhetorical education explicitly engages ethics. While early forms of rhetorical training linked rhetoric with virtue, both personal and civic, many traditions that followed actually focused on accepted taste, creating an exclusionary system of training. As a result, Johnson writes, the field has "questioned the ethics both of teaching virtue and of imposing ideological and political agendas in the writing classroom" (528). Johnson finally challenges writing teachers who promote virtues or habits of mind to consider the problem of exclusion: "[M]ay habits of mind in the *Framework* actually exclude students from succeeding in secondary and postsecondary writing?" (528).

Indeed, it is difficult if not impossible to extract what I am calling posthuman practice from aesthetic or ethical consideration. Unlike some forms of rhetoric (especially current-traditional rhetoric's emphasis on *belles lettres*), a posthuman practice as an ethic does not impose moral ideals but works within a given situation to develop *good practices*. In "Ecologies of Practice," Heidi Rae Cooley renders explicit mediation's aesthetic and ethical dimensions. Cooley understands media ecology as "a way of theorizing an ethical response to a condition of always already being in-relation, i.e. to bodies, technologies, and vital processes (biological, digital, social, etc.)" (59). This formulation of ecologies matches up with the *Framework*'s aims but widens the circumference of available media. For Cooley, "how to live is a matter of being attuned to these arrangements of velocities and affectivities . . . of relations, capacities, thresholds, amplitudes, variations, and transformations that one comes to 'know' the body" (60). Cooley argues that the ethical is

> a matter of pursuing a way of being with and through one's practice, practice which is deeply committed to thinking about the interconnectedness of life and life processes (be they biological or socio-cultural)—and the resulting sedimentations that is the artwork in its becoming. (63)

As we are embodied and embedded as an ecological body, a practice absent moral imperatives is itself necessary since we cannot avail ourselves of critical distance to impose such ideals. The rhetorical practice that results takes on ethical-aesthetic dimensions that are not unlike the experiences a human body participated in with

regard to how it moves and improves its writing techniques, eating regimen, or its physical exercise. To be clear, this analogy is not meant to reduce ecology once more to the individual biological body but, instead, refigure a human body as within a more expansive ecological practice of mediation. In the final section, I reconnect these claims with rhetoric proper and argue for a new way to relate to and activate metacognition for writing studies.

<div align="center">

Practice Makes Persuasion

</div>

In this final section, I reconnect rhetorical practice with the *Framework*'s proposal for understanding writing ethics as a continuous cultivation of habits. Such ethics are not to be thought of as separate from practice but *are* practices in the strictest sense. That is, ethics in a posthuman practice are not ideals imposed upon conditions for actions we ought do but are instead ongoing exercises whose aim is to compose new capacities for conducting ourselves within expanded media ecologies.

Technology theorist Gilbert Simondon, writing about technology and aesthetics, raises a similar question in a letter he wrote but never sent to Jacques Derrida, asking the elder philosopher: "There is no reference to religious thought and practice in your project. Why?" (1). Simondon qualifies his own question writing, "We should also take into account aesthetic thought and practice, regardless of whether the latter has a reflexive component" (1). Simondon argues that "[a]esthetics is not only, nor first and foremost, the sensation of the 'consumer' of the work of art" but "also, and more originally so, the set of sensations, more or less rich, of the artists themselves" (3). Building on that thought, Simondon proposes that "[t]here is a continuous spectrum that connects aesthetics to technics" (4). Simondon's question, one that considers practice as a set of distributed sensations, is also a question for rhetoric. Given the historical baggage that accompanies rhetoric as *mere* form, rhetoric should welcome an approach that connects aesthetics and ethics and emphasizes practice as a continuous exercise, a "pragmatic task of self-transformation." If we are to reconsider practices as informing "habits of mind" and, further, the more expansive ecology of which we are part, then the rhetorical training and writing pedagogy we seek would be an ethic for composing habits, dispositions, and orientations at least as much as the ability to consciously reflect on and account for causes and effects.

This essay shares the task undertaken by Collin Brooke in *Lingua Fracta*. Underlying his project to remediate rhetoric's canons in response to emerging media is the claim that rhetoric takes place within the "ecology of practice." Explaining that ecology, Brooke writes that "[e]cologically, practice includes all of the 'available means' and our decisions regarding which of them to pursue. . . . [b]ut it is important to acknowledge those practices may be unintended" (49). In blurring distinctions between intended and unintended practices, Brooke positions nonconscious activity,

including habits and asignifying sensations, to be as much a part of a rhetoric's practices as conscious attention and signifying activity. Echoing many from above, I read Brooke as characterizing rhetorical practice and "all of the 'available means'" as a distributed and shared endeavor between an array of things and involves generating and sustaining dispositions at least as much as becoming consciously aware of power relations.

Practice relies on repetition, and repetition is fundamental to rhetoric. Even in a supposed "formal" register, our tropes and figures are repetitions that repeat themselves from shared sayings and clichéd commonplaces. Such exercise relies on and builds from a material body's practice of habits. Persuasion occurs, then, not as much through rational appeals to claims but through an exercise of material and discursive forms. *Practice makes persuasion*. These practices, not unlike topoi or commonplaces, become the "common notions" Deleuze says are "that in which bodies agree with one another" (*Spinoza* 115). Our practices are infectious. Rita Raley discusses something similar, first by conflating practice with habit, writing that "[p]ractices unfold within a structure of bodily habit, a set of physical activities that, while modular, nonetheless cohere when ordered by a procedural script. This script is necessarily repeatable, and it is the repetition that allows a practice to emerge as a practice (9). Of particular interest for rhetoric is how Raley cautions against equating practice as only concrete or particular by positing that "[t]o think exclusively in terms of material specificities is to lose sight of the intermedial and social systems in which the object or thing is embedded, the myriad ways in which they are used and experienced, and the micro-communities they engender" (13). Put differently, if practice is only ever understood as what is situated, concrete, or particular, then practice would affect nothing. This understanding of practice can be extended to rhetoric in that rhetoric cannot only be situated, concrete, or particular or else there would be no rhetoric. To exist at all, rhetoric has to be exercised *in between* a supposed general and particular, infecting multiple registers.

This essay has repeatedly claimed repetition to be a productive force that extends to how we consider habit. Elizabeth Grosz claims that habit is "a fundamentally creative capacity that produces the possibility of stability in a universe in which change is fundamental" (219). Habit is firm but flexible, positioned but persuadable. The *Framework*'s focus on "habits of mind" would be well served to focus not only on what habits to encourage but also how existing habits can be made differently productive. Sloterdijk's archivist, discussed in contrast to the humanist letter writer, functions very much like the practitioner in the previous passages whose chief task is to generate an abundance of relations. Sloterdijk activates the function of the archivist in describing how pedagogy interacts within an abundance of relations built up as habit. "Pedagogical *mechané* grows from the considered decision to use habit for its own negation—one could say it uses the probably of a medium for increasing

improbability. . . . That is, getting to the root of the problem through practising repetitions" (*You Must Change Your Life* 199). These exercises do not happen in abstract space but take place across determined relations. For instance, throughout this article, I have been careful not to negate the term "metacognition" as it has become an unquestioned habit in the field. To negate that term would be to work against an entire field's inertia. I propose, however, revising our understanding of metacognition in a way that resonates with Sloterdijk's pedagogical *mechané* and what I have called "posthuman practice."

In the traditional sense, metacognition refers to one's ability to reflect on one's own thinking, account for actions, assess results, plan future actions. Engaging in a bit of etymology, I propose another version. *Meta* often denotes something beyond or above. Typically, *meta* is associated with theoretical insight (a sight afforded by a distance or remove from an object to which one looks). Such a connotation for the prefix then shares its many uses: method, metaphor, metadata. *Meta*, however, had alternate uses. In Greek, *meta* also signals "post" or "after" and has connotations with "among." That is, instead of *meta* as only meaning "about," it also harbors other relations that occur between "among" or "after." Consider metamorphosis, metastability, or metastasize. Each of these words in their regular use emphasize not reflective or privileged distance but instead a perception for moving *among*. Metacognition practiced in that way would shift from being about an individual's cognition and instead a capacity to affect among *distributed* cognition (cf. Lave). A rhetorical practice that emphasizes metacognition as relating to perception among practices radically shifts its priorities away from demonstrating conscious awareness and toward serial encounters with a variety of different relations.

A practice proceeds as an infectious germ that activates (metastasizes) new relationships (metamorphoses) within an ongoing habit (metastability) of relations (metaphysics). This habit/habitat is an ecology whose inventiveness is accelerated when its tendencies are exercised. Rhetoric, framed in the way, becomes an exercise of moving across biological, technical, and cultural registers. Practice unfolds in a milieu similar to the *writing body* I mentioned earlier or what Peter Simonson has recently termed *inventional media*. Simonson's term does not refer to any specific medium as technological conduits but are an "interlocking and dynamic array of media" in "ontological, material, and expressive senses" and broadly group together as "habitats," "artistic material," and "modes of communication." Rhetoric, in practice and performance, is a continuous exercise of tendencies of *inventional media* or the *writing body* that produce new capacities of relating within an ecology of practice.

Posthuman practice, leveraging writing activities within an expansive media ecology, offers rhetoric a return to many of the inventive ethical and pedagogical opportunities from the tradition's early emphasis on practice and bodily exercise. That early version of rhetorical training sought to assemble abundance (*copia*) and

construct storehouses (*thesaurum*) through repeated exercises with constraints (Marrou 1956; Clark 1957; Cribiore 2001; Hawhee 2004; J. Walker 2011). What I have proposed here is that rhetoric, by attending more closely to practice and its nonconscious and nonreflective activity, reframes itself by considering its operations as exercises within a more expansive body of relations than can be reduced to any individual human. The central ethic for a rhetoric framed as *posthuman practice* is to exercise the humble, open-ended claim that *we do not yet know what a (writing) body can do*; after which, we attempt to find out, repeatedly.

WORKS CITED

Bourdieu, Pierre. *Outline of a Theory of Practice*. Cambridge: Cambridge UP, 1977. Print.

Braidotti, Rosi. *The Posthuman*. Cambridge: Polity, 2013. Print.

Brooke, Collin G. *Lingua Fracta: Toward a Rhetoric of New Media*. Cresskill: Hampton Press, 2009. Print.

Clark, Donald Lemen. *Rhetoric in Greco-Roman Education*. Columbia: Columbia UP, 1957. Print.

Connolly, William E. *Neuropolitics: Thinking, Culture, Speed*. Minneapolis: U of Minnesota P, 2002. Print.

Cooley, Heidi Rae. "Ecologies of Practice." *Depletion Design: A Glossary of Network Ecologies*. Ed. Carolin Wiedemann and Soenke Zehle. Amsterdam: Institute of Network Cultures, 2012. 59–64. Print.

Cooper, Marilyn M. "Being Linked to the Matrix: Biology, Technology, and Writing." *Rhetorics and Technologies: New Directions in Writing and Communication* Ed. Stuart Selber. Columbia: U of South Carolina P, 2010: 15–32. Print.

Council of Writing Program Administrators, National Council of Teachers of English, and National Writing Project. *Framework for Success in Postsecondary Writing*. WPA Council, 2011. Web. 1 Aug. 2014.

Cribiore, Raffaella. *Gymnastics of the Mind: Greek Education in Hellenistic and Roman Egypt*. Princeton: Princeton UP, 2001. Print.

Crowley, Sharon. *The Methodical Memory: Invention in Current-Traditional Rhetoric*. Carbondale: Southern Illinois UP, 1990. Print.

Deleuze, Gilles. *Empiricism and Subjectivity: An Essay on Hume's Theory of Human Nature*. Trans. Constantin V. Boundas. Columbia: Columbia UP, 1991. Print.

———. *Spinoza: Practical Philosophy*. San Francisco: City Lights Books, 1988. Print.

DeVoss, Dànielle Nicole, Ellen Cushman, and Jeffrey T. Grabill. "Infrastructure and Composing: The When of New-Media Writing." *College Composition and Communication* (2005): 14–44. Print.

Dobrin, Sidney I. "Introduction." *Writing Posthumanism, Posthuman Writing*. Ed. Sidney I. Dobrin. Anderson: Parlor Press, 2015: 3–18. Print.

Downs, Douglas, and Elizabeth Wardle. "Teaching about Writing, Righting Misconceptions: (Re)Envisioning 'First-Year Composition' as 'Introduction to Writing Studies.'" *CCC* 58.4 (2007): 552–84. Print.

Edbauer, Jennifer H. "(Meta) Physical Graffiti: 'Getting Up' as Affective Writing Model." *JAC* (2005): 131-159.

Epstein, David. *The Sports Gene: Inside the Science of Extraordinary Athletic Performance*. London: Penguin, 2014. Print.

Ericsson, K. Anders. "Deliberate Practice and Acquisition of Expert Performance: A General Overview." *Academic Emergency Medicine* 15.11 (2008): 988–94. Print.

Ericsson, K. Anders, Ralf T. Krampe, and Clemens Tesch-Römer. "The Role of Deliberate Practice in the Acquisition of Expert Performance." *Psychological Review* 100.3 (1993): 363–406.

Foucault, Michel. "Self Writing." *Ethics: Subjectivity and Truth*. Ed. Paul Rabinow. Trans. Robert Hurley. New York: The New Press, 1997. 207–22. Print.

———. *The Order of Things: An Archeology of the Human Sciences*. New York: Vintage (1973). Print.

———. *Language, Counter-Memory, Practice: Selected Essays and Interviews*. Ithaca: Cornell UP, 1980. Print.

Gladwell, Malcolm. *Outliers*. New York: Little, Brown, 2008. Print.

Grosz, Elizabeth. "Habit Today: Ravaisson, Bergson, Deleuze, and Us." *Body & Society* 19.2–3 (2013): 217–39. Print.

Hairston, Maxine. "Diversity, Ideology, and Teaching Writing." *CCC* (1992): 179–93. Print.

Hansen, Kristine. "The *Framework for Success in Postsecondary Writing*: Better than the Competition, Still Not All We Need." O'Neill, et al. 540–43.

Harris, Joseph. "Revision as a Critical Practice." *College English* (2003): 577–92. Print.

Hawhee, Debra. *Bodily Arts: Rhetoric and Athletics in Ancient Greece*. Austin: U of Texas P, 2004. Print.

Hayles, N. Katherine. *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics*. Chicago: U of Chicago P, 2008. Print.

Hillocks, George. *Teaching Writing as Reflective Practice*. New York: Teachers College Press, 1995. Print.

Johnson, Kristine. "Beyond Standards: Disciplinary and National Perspectives on Habits of Mind." *College Composition and Communication* 64.3 (2013): 517–41.

Latour, Bruno. "How to Talk about the Body? The Normative Dimension of Science Studies." *Body & Society* 10.2–3 (2004): 205–29. Print.

Lave, Jean. *Cognition in Practice: Mind, Mathematics, and Culture in Everyday Life*. Cambridge: Cambridge UP, 1988. Print.

Manning, Erin. "Against Method." *Non-Representational Methodologies: Re-envisioning Research*. Ed. Phillip Vannini. New York: Routledge, 2015. 52–71. Print.

Mara, Andrew, and Byron Hawk. "Posthuman Rhetorics and Technical Communication." *Technical Communication Quarterly* 19.1 (2009): 1–10.

Marrou, Henri Irénée. *A History of Education in Antiquity*. Madison: U of Wisconsin P, 1956. Print.

Massumi, Brian. *Semblance and Event: Activist Philosophy and the Occurrent Arts*. Cambridge: MIT Press, 2011. Print.

———. *Parables for the Virtual: Movement, Affect, Sensation*. Durham: Duke UP, 2002. Print

McComiskey, Bruce. "'Bridging the Divide': The (Puzzling) *Framework* and the Transition from K–12 to College Writing Instruction." O'Neill, et al. 537–40.

Micciche, Laura R. "Writing Material." *College English* 76.6 (2014): 488–505. Print.

———. "Making a Case for Rhetorical Grammar." *CCC* (2004): 716–37.

Muckelbauer, John. "On Reading Differently: Through Foucault's Resistance." *College English* 63.1 (2000): 71–94.

Muckelbauer, John, and Debra Hawhee. "Posthuman Rhetorics: 'It's the Future, Pikul.'" *JAC* (2000): 767–74.

Nowacek, Rebecca S. *Agents of Integration: Understanding Transfer as a Rhetorical Act*. Carbondale: Southern Illinois UP, 2011. Print.

O'Neill, Peggy, et al. "Symposium: On the *Framework for Success in Postsecondary Writing.*" *College English* 74.6 (2012): 520–33.

Phelps, Louise Wetherbee. "Practical Wisdom and the Geography of Knowledge in Composition." *College English* (1991): 863–85.

Pickering, Andrew. "Practice and Posthumanism." *The Practice Turn in Contemporary Theory*, Ed. Theodore Schatzki. New York: Routledge, 2001. 163–74. Print.

Raley, Rita. "TXTual Practice" in *Comparative Textual Media: Transforming the Humanities in the Postprint Era*. Eds. Katherine Hayles and Jessica Pressman. Minneapolis: U of Minnesota P, 2013. 5–32. Press.

Rickert, Thomas. *Ambient Rhetoric: The Attunements of Rhetorical Being*. Pittsburgh: U of Pittsburgh P, 2013. Print.

Rivers, Nathaniel A., and Ryan P. Weber. "Ecological, Pedagogical, Public Rhetoric." *CCC* (2011): 187–218. Print.

Rotman, Brian. *Becoming Beside Ourselves: The Alphabet, Ghosts, and Distributed Human Being*. Durham: Duke UP, 2008. Print.

Schatzki, Theodore R. "Introduction." *The Practice Turn in Contemporary Theory*. Eds. Theodore R. Schatzki, Karin Knorr-Cetina, and Eike Von Savigny. East Sussex: Psychology Press, 2001. Print.

Schivelbusch, Wolfgang. *The Railway Journey: The Industrialization of Time and Space in the Nineteenth Century*. Oakland: U of California P, 2014. Print.

Schön, Donald A. *The Reflective Practitioner: How Professionals Think in Action*. New York: Basic Books, 1983. Print.

Scott, Tony, and Nancy Welsh. "One Train Can Hide Another: Critical Materialism for Public Composition." *College English* 76.6 (2014): 562–79. Print.

Severino, Carol. "The Problems of Articulation: Uncovering More of the Composition Curriculum." O'Neill, et al. 533–6.

Simondon, Gilbert. "On Techno-Aesthetics." Trans. Arne De Boever. *Parrhesia* 14.1 (2012): 1–8. Print.

Simonson, Peter. "Reinventing Invention, Again." *Rhetoric Society Quarterly* 44.4 (2014): 299–322. Print.

Sirc, Geoffrey. "Serial Composition." *Rhetorics and Technologies: New Directions in Writing and Communication*. Ed. Stuart Selber. Columbia: U of South Carolina P, 2010: 56–73. Print.

Sloterdijk, Peter. *You Must Change Your Life: On Anthropotechnics*. Trans. Wieland Hoban. Cambridge: Polity, 2014. Print.

————. "Rules for the Human Zoo: A Response to the Letter on Humanism." *Environment and Planning D Society and Space* 27.1 (2009): 12–29.

Stengers, Isabelle. "Introductory Notes on an Ecology of Practices." *Cultural Studies Review* 11.1 (2013): 183–96. Print.

Stormer, Nathan, and Bridie McGreavy. "Thinking Ecologically about Rhetoric's Ontology: Capacity, Vulnerability, and Resilience." Forthcoming from *Philosophy and Rhetoric*. Manuscript. 2017.

Sullivan, Patrick. "Essential Habits of Mind for College Readiness." O'Neill, et al. 547–53.

Thrift, Nigel. *Non-Representational Theory: Space, Politics, Affect*. Cambridge: Routledge, 2008. Print.

Walker, Clay. "Composing Agency: Theorizing the Readiness Potentials of Literacy Practices." *Literacy in Composition Studies* 3.2 (2015): 1–21.

Walker, Jeffrey. *The Genuine Teachers of this Art: Rhetorical Education in Antiquity*. Columbia: U of South Carolina P, 2011. Print.

Wan, Amy J. "In the Name of Citizenship: The Writing Classroom and the Promise of Citizenship." *College English* 74.1 (2011): 28–49. Print.

Wolfe, Cary. *What Is Posthumanism?* Minneapolis: U of Minnesota P, 2010. Print.

Yagelski, Robert. *Writing as a Way of Being: Writing Instruction, Nonduality, and the Crisis of Sustainability*. Cresskill: Hampton Press, 2011. Print.