

CHAPTER 6.

AROUND 1986: THE EXTERNALIZATION OF COGNITION AND THE EMERGENCE OF POSTPROCESS INVENTION

At the start of this book, I noted a straightforward historical fact: the scholarly discourse surrounding postprocess has fizzled and perhaps even ended. Yet, I also offered an equally verifiable, if somewhat more contentious claim: even if few scholars discuss postprocess *as such* these days, postprocess tenets and principles have gained widespread assent. They just haven't been called *postprocess*. As I hope to show, the externalist, paralogic view of writing forwarded by postprocess has proven especially influential within the scholarly discourse on rhetorical invention. In tracing out a genealogy of postprocess invention here, I also hope to continue an intellectual project admirably begun by Matthew Heard, Lee-Ann M. Kastman Breuch, Paul Lynch, and Alexander Reid: calling forth postprocess theory's pedagogical implications and applying them to particular acts of writing.

I have emphasized the inherent linguistic indeterminacy of *postprocess* elsewhere, even framing it as a positive feature of the underlying view of language, not a problem to be corrected. Here I would make a related point: one need not understand the meaning of the term in order to apply a postprocess approach. Indeed, as this historical account will illustrate, one need not even possess the term. Rather, many of the most robust contemporary approaches to invention exhibit postprocess tenets—and some of these theoretical systems present direct applications to composition instruction. In justifying this claim, however, I must assume an atypical argumentative stance, identifying two scholarly discourses as theories of postprocess invention, though neither is typically framed as a postprocess theory *or* as a theory of invention. I refer here to ecological and posthuman approaches to composing.

For the sake of clarity, let me note an important distinction regarding my use of the term *ecological*. The chapters in the 2001 collection *Ecocomposition: Theoretical and Pedagogical Approaches* can be categorized according to how they imagine the relationship between ecologies and composition studies. Some chapters present the ecological sciences, environmental activism, and sustainability

as fitting subject matter for readings and assignments in “themed” composition courses. In other chapters, ecology becomes a metaphor or model for re-thinking the nature of the writing subject and the emergence of written texts. Marilyn Cooper strenuously advocates the latter conception in her Foreword, as do the collection’s editors, Christian R. Weisser and Sidney Dobrin, in their single-authored chapters and co-authored Introduction. According to this understanding, *ecomposition* might represent “the investigation of the total relations of discourse both to its organic and inorganic environment and to the study of all of the complex interrelationships between the human activity of writing and all of the conditions of the struggle for existence” (Dobrin, “Writing Takes Place” 12-13). For understandable and even charitable reasons, back in 2001 Dobrin and Weisser “resist[ed] . . . to some degree” their own “urge . . . to provide a concrete definition of *ecomposition*,” which might have constrained its meaning to their own preferred usage (“Breaking” 2). However, eventually the costs of conflating the two senses of *ecomposition* became clear. Thus, at present, Dobrin’s own personal website distinguishes between “distinct but overlapping subjects”: “ecocriticism and *ecomposition*, including questions of oceanic criticism” (i.e., the first definition) and “the ecological properties of writing” (i.e., the second). Here, likewise, I employ *ecological composition* to denote a theory of rhetoric and writing that contemplates the co-constitutive interaction(s) of subjects and their environs.

Throughout this book, I’ve argued that externalism (which implies paralogy) is the defining trait of postprocess theory and pedagogy. As I’ll demonstrate here, the recent history of inventional theory evidences a steady broadening, which I will call an externalization, in its underlying concept of “mind.” The vast majority of Process-era inventional schemes presupposed cognitive internalism, the idea that one’s mind is separate from other minds and from the world in which those minds exist. In contrast, postprocess approaches—including ecological and posthuman versions—assume an externalist viewpoint: that no cognitive action can occur without the contribution of human and/or non-human others, including languages and various technological artifacts. By describing how externalized minds operate, ecological and posthuman theories help to account for the inventional act or event: how it happens, where it happens, among and with whom it becomes manifest. Each offers a broadened account of human (and, subsequently, non-human) cognition, thereby allowing for a different vision of the writer, the act of writing, and the written text.

To favor an internalist view of invention is often, by implication, to forward a vision of writing in which self-expression and clarity of presentation are paramount; one is a good writer for her ability to translate her own ideas into words and to employ approved grammatical standards. In contrast, complex or

networked, postprocess forms of invention allow very different objects to qualify as writing (including things like databases and search engines, or even networks themselves) and advance very different definitions of quality, often favoring rhetorical outcomes over precise meanings (Johnson-Eilola, “Database” 220; Johnson-Eilola and Selber, “Plagiarism” 375). Furthermore, given the current media environment, in which texts blend together in constantly evolving media networks, “fragmentation” and “arrangement,” that is, tearing apart and putting (back) together, are becoming increasingly viable forms of creativity. As Johndan Johnson-Eilola notes, quote/unquote “newness” seems less and less relevant with each passing day (“Database” 209-10). In networked spaces, creativity is increasingly becoming “the ability to gather, filter, rearrange, and construct new texts,” to (re-)deploy texts within novel contexts, or, as he states elsewhere, “movement, connection, and selection rather than a mythical genius to pull inspiration from within” (*Datacloud* 134, 110).

Throughout this book I’ve argued that periodization matters—even to such a degree that historians cannot dispense with it, despite the challenges that it may and often does present. In breaking from the received wisdom about postprocess—that the term denotes an approach or mindset—here I suggest that it also refers to a period of compositional thought concerning invention. In *Postmodernism*, Fredric Jameson introduces the notion of the cultural dominant as a means for discussing widespread (though hardly universal) cultural tendencies. He argues that it is “only in the light of some conception of a dominant cultural logic or hegemonic norm that genuine difference could be measured and assessed” (6). In my estimation, since roughly 1986, postprocess has acted as a disciplinary cultural dominant for inventional thought, with its tenets (externalism, the impossibility of generalization, the unteachability of writing as such, etc.) providing the largely unspoken foundation(s) on which a host of divergent theories arise. Taking a cue from Raymond Williams, I assume that theoretical movements and the periods that they define inter-lock and/or overlap, such that, at any given moment, one might be emergent (e.g., postprocess), another dominant (e.g., Process), and still others residual (e.g., current-traditionalism). Following Sharon Crowley, I would date the emergence of Process to “around 1971” and, as I have already suggested, I place the emergence of postprocess—at least within inventional discourse—around 1986 (“Around 1971” 187). I prefer to remain silent concerning dates of dominance and decline as these may be impossible to identify accurately—via textual traces or otherwise. Of course, while dating the emergence of postprocess invention, I would also reaffirm a point made by Richard Young and Maureen Daly Goggin: “Different frames prompt different decisions about boundary markers” (31). In studying any other sub-field, one might arrive at a different periodization schema for postprocess. The

other chapters in this text, I would argue, demonstrate as much; I have collected them all here not to unify them but so that they might collide or produce friction.

Although externalist principles were more-or-less absent from inventional scholarship prior to 1986, they're now everywhere—or pretty close to it. In addition to those that I'll focus on in later sections, they arise in the genre-based inventional schemes of Anis Bawarshi, which “extend the sphere of agency in the study and teaching of writing to include not only what writers do when they write, but what happens to writers that makes them do what they do (*Genre* 50; c.f., “Writing Post-Process”). They help guide the improv-oriented pedagogy of Hannah J. Rule (*Situating* 137, 143). They are present in Danielle Koupf's scrap-writing and critical-creative tinkering inventional schemes (“Scrap-Writing”; “Proliferating”). They are evident, as well, in Jacqueline Preston's assemblage-oriented approach, which asks students to conduct “traditional invention activities, such as mapping, brainstorming, and reflecting, but also [to produce] writing that on the surface is not readily identified as invention” (“Project(ing) Literacy” 44). They also inform the model of *distributed invention* that Kara Poe Alexander and Danielle M. Williams theorize as a sub-form of distributed cognition (“DMAC”).

By focusing on inventional scholarship in this chapter, I offer one more post-modern *petit recit*—though one that dovetails, oddly enough, with one of the field's modernist grand narratives. In 1962, Elbert W. Harrington would write, “Most teachers know that rhetoric has always lost life and respect to the degree that invention has not had a significant and meaningful role” (“Modern Approach” 373). While I remain agnostic concerning the factual content of Harrington's claim, I would note its fairly widespread endorsement throughout the 1970s and 1980s by Richard E. Young and Alton L. Becker (“Toward a Modern Theory” 453), Janice Lauer (“Heuristics” 396), Lynn Worsham (“Question” 201), and George L. Pullman (“Rhetoric” 369), among others. In short, several (and perhaps many) scholars seem to have seen inventional research as a vital aspect of that newfound discipline, rhetoric and composition, during the years when Process reigned. Even so, as Kelly Pender states, “After the 1980s, compositionists weren't exactly lining up to the answer the question, What is invention?” (66). Pender has not been alone in puzzling over this historical curiosity.

In her 2002 book chapter, “Rhetorical Invention: The Diaspora,” Janice M. Lauer points out a somewhat harrowing truth: the 1994 collection *Landmark Essays on Rhetorical Invention* had not included an essay written after 1986. Furthermore, in the years since then, scholarship devoted exclusively to invention had become “difficult to find.” Lauer concludes, however, that inventional research had not disappeared but “migrated, entered, settled, and shaped many other areas of theory and practice in rhetoric and composition” (1-2). She also

identifies more recent approaches as being “dispersed and localized, precluding any final characterization of a unified theory or common set of practices” (11). I do not intend to argue against Lauer here but instead to offer a parallel account.

While much inventional work did migrate into other areas around 1986, an entirely different strand began to emerge simultaneously—one with externalist instead of internalist presuppositions: a postprocess approach. Or, stated differently: as those researching invention increasingly came to reject internalist models of cognition for more social and ecological ones, a broad “crisis” began to emerge within that branch of Process theory—an event implicitly demonstrating how theoretically crucial internalism had always been. In addition, I would argue, the transition from Process to postprocess would necessarily entail the dispersal that Lauer notes, given that postprocess theories tend to focus on specific applications as opposed to generalized principles, and also a related disavowal—of invention as singular, settled, and resulting from direct human intention.

Because prior inventional theories held a foundational relation to internalism, this new, externalist scholarship was not initially recognized as relevant to invention *as such*. Indeed, it would take quite some time before externalist scholarship was—or perhaps even *could be*—seen as relevant to invention. To offer preliminary support for this claim, I’d like to turn to two articles published by Phillip K. Arrington in our focal year, 1986, as well as a chapter published by Janet M. Atwill in 2002.

Arrington’s articles, “Tropes of the Writing Process” and “The Traditions of the Writing Process,” both offer philosophically and historiographically sophisticated taxonomies of Process. For our purposes, though, his classificatory frameworks—and even the arguments he derives from them—are less crucial than what they implicitly indicate. In “Tropes” Arrington provides one ostensibly comprehensive taxonomy of Process approaches, defining each according to the master trope on which it relies (metaphor, metonymy, or synecdoche), all while demonstrating each model’s implications for invention. In “Traditions” he offers another taxonomy, once again emphasizing inventional implications. And, this time he also illuminates the particular theory of mind underlying each one. Even in the all-too-common Process era tendency to divide “process” from “product,” he argues, “Nothing less is at stake . . . than a theory of learning and, consequently, a theory of mind” (“Traditions” 2). Elsewhere, he writes, “Each tradition”—classical rhetoric, empiricism (i.e., cognitivism), and romanticism (i.e., vitalism)—“seeks to give us a model for the mind, for knowing, learning, and, finally, for language” (9). Yet, despite his preoccupations, Arrington does not mention an externalist approach to writing and/or writing instruction in either text.

Of course, one can encounter the limits of a model without yet knowing how to supersede it; many conceptual advances begin first with negative critiques be-

fore, eventually, someone advances positive claims toward whatever-comes-next. This phenomenon, I would argue, occurred in the transition toward postprocess invention. Charles Yarnoff's (1980) "Contemporary Theories of Invention in the Rhetorical Tradition" faults the internalism of several common inventional schemes but does not advance an externalist alternative. Notably, within my terminology, that text quite clearly advances a post-process approach to invention, concerned with the social (i.e., economic, political, racialized, gendered, etc.) elements of invention. Similarly, although he is chiefly concerned with discussing internalist inventional schemes, Thomas M. Rivers may himself endorse externalism in his (1982) "A Catalogue of Invention Components and Applications." In that text, Rivers affirms the value of ritual toward invention and indirectly suggests the importance of the writer's ecology (521, 525). He also seems to forward semantic-externalist concepts of invention (523-24).

In any case, here is the up-shot: in early 1986, even a very good scholar like Arrington, focused specifically on invention *and on theories of mind*, could claim to offer a comprehensive account of inventional schemes that did not include any externalist positions. This silence doesn't necessarily *prove* that none existed, of course. But, it does add some credence to two of my claims: first that such scholarship was only then—at that very time—beginning to emerge; second, that externalist scholarship was not initially seen as relevant to invention or offering a theory of invention.

In fairness to Arrington, I should note his objection to an earlier version of this account (i.e., to Lotier, "Around 1986"). He writes,

Given the trope upon which theories of rhetorical invention have for centuries relied—of "hunting" and "finding"—it seems more historically accurate to suggest that *inventire* has always been an external process to some extent, as were the *topoi* rhetors relied on to invent arguments and appeals. Those codified *topoi* lay outside a rhetor's mind, as did opinions, the values and emotions of an audience, and much else, though the ability to discern, select, and combine what lay outside cannot even now, for all our technological wizardry, jettison a discerning human agent to perform these inventive acts. ("Most Copious Digression" 563)

I certainly agree that inventional thought has always been "external . . . to some extent." Even so, I would contend that the tropes of *hunting* and *finding* imagine the mind as a self-sufficient entity that can survey the external world without needing to rely upon it. A fully external account of invention would deny the distinction between hunter, hunted, and landscape by presuming that

the hunter in question (i.e., the mind) exists only as a function of the other two. Similarly, working from an externalist perspective, I would frame the ability of Arrington's "discerning human agent" *to discern* as a function of language, symbols, and other external objects. To say as much isn't necessarily to "jettison" the human agent altogether but to re-think its nature (and its agency).

If Arrington's scholarship illuminates the (internalist) state of inventional thinking at the dawn of the postprocess period, Atwill's Introduction to *Perspectives on Rhetorical Invention* (2002), the same collection in which Lauer's "Diaspora" chapter appears, demonstrates just how long internalist suppositions would hold sway. By Atwill's accounting, "The very purpose of inventional strategies is to enable practice across rhetorical situations." She also distinguishes between two conceptions of postmodernism, one associated with Stanley Fish and the other with Pierre Bourdieu. Fish's model, she argues, "has been deployed *to challenge invention*," whereas Bourdieu's has "*significantly more to offer* to our understanding of invention" ("Introduction" xvi, emphasis added). Analyzing Atwill's work, John Muckelbauer clarifies the stakes of this distinction: "If invention is conceived as a tool in the process of generating persuasive claims and proofs for particular situations, it tends to be premised on a rather explicit model of consciousness-directed subjectivity [i.e., internalism]. Such an account is apparently irreconcilable" with Fish's version of postmodernism, in which "the subject cannot be bracketed off from contingency and context," that is, in which externalism is pre-supposed (*Future* 27). Ultimately, then, Muckelbauer concludes,

What is noteworthy . . . is that Fish's approach doesn't appear to be of value [to Atwill] because it forces a humanist approach to question the basic premise of a transcendent subject and representational knowledge. . . . On the other hand, Bourdieu's approach is promising because it allows those basic premises to remain intact. (28)

That is, for Atwill, an internalist, "humanist" (rather than posthumanist) conception of subjectivity is so fundamentally intertwined with invention that challenges to humanist subjectivity are also challenges *to invention itself*.

In what follows, I will argue that externalist (i.e., postprocess) invention research began to emerge around 1986; however, I do not mean to imply that all inventional work became externalized, evidencing postprocess tenets at that time. Rather, this is the date of emergence for the earliest of such works. Indeed, none of the post-1986 works Lauer mentions in her own 2002 survey are ecological, posthuman, or explicitly postprocess in nature. Even so, the dispersed and localized nature of those theories, coupled with their resistance to theoretical generalization bears the marks of postprocess, and I cannot help but note the

temporal coincidence of her schema with my own. Furthermore, the transition from Process to postprocess would necessarily entail the dispersal that Lauer notes, given that postprocess theories tend to focus on specific applications as opposed to generalized principles, and also a related disavowal—of invention as singular, settled, and resulting from direct human intention.

Finally, I would forward one more caveat: though my ensuing analysis focuses primarily on the intellectual history of an academic discourse, these theoretical transformations did not transpire in a vacuum, apart from more material, historical shifts. Within the United States and many similarly industrialized Western nations, the post-World War II era witnessed a number of massive transformations. On one hand: the industrial economy faded into the post-industrial, globalized and/or networked one(s). On another hand: the modern regimes of “culture” (that is, poetry, literature, philosophy, architecture, and art, etc.) gave way to the subsequent postmodern and the postpostmodern ones. On a third (prosthetic?) hand: in light of advances in information technologies and their corresponding assimilation into day-to-day practices, the human came to appear ever more obviously as the posthuman (or cyborg)—even if, as Andy Clark argues, humans are “natural born cyborgs” or, as N. Katherine Hayes demonstrates, “We have always been posthuman” (Clark, *Natural Born Cyborgs*; Hayes, *How We Became Posthuman* 291). Though they are importantly separate elements of the same spatial-temporal-technological-cultural-historical ecology, each of the three aforementioned conversions contributed to, supported, and extended the others in complex ways. And, of course, these transformations developed at uneven rates and they were unevenly distributed in physical space. As a result, even if one can easily articulate important distinctions between introspective forms of invention and externalist, ecological, or networked types, one cannot so easily attribute these changes to any single influence or set of influences. That is, insofar as the networked, externalist form of invention draws from and/or employs and/or produces objects designed for circulation and re-deployment rather than engaging in and supporting traditional forms of stable ownership, it is characteristically post-industrial; insofar as it arrives at or becomes instantiated within polyvocal assemblages, collages, and remixes, it is characteristically postmodern; insofar as it employs forms of systems-thinking and distributed cognition, it is characteristically posthuman.

The foregoing paragraph may sound abstract, so let us reduce the scale a bit: changes in compositional theory derive from more than just the intentional acts of composition theorists; they emerge in response to and with assistance from advances and adaptations in the ecology of writing, which is itself active in the productive process. Ecological and posthuman principles have become more central to composition’s disciplinary consciousness because changes in the techno-linguistic-intellectual ecology of late-twentieth-century America have af-

forded novel possibilities for and practices of writing. In their application and use, the personal computer, the search engine, the wiki, and other information technologies have produced major shifts in the concept of invention, making the idea that writing had ever been individualizable seem ever more untenable.

IS THE “EXTENDED MIND” POSTPROCESS? CAN IT BE(COME) POSTPROCESS?

Before proceeding onward, I want to justify the claim that ecological and post-human visions of writing accord with postprocess. That argument is more easily justified in relation to ecological models. Although postprocess most certainly did not *invent* ecological views of composing, the first three scholars to introduce such views into the discourse of composition studies all fit into the narratives I have told throughout this book. Richard Coe, author of “Eco-Logic for the Composition Classroom” (1975), was a prominent member of the Canadian Inkshed collective that Anthony Paré dubbed *post-process* and which, as I have shown, accords closely with postprocess in several important respects. Throughout the 1980s, Louise Wetherbee Phelps worked to unsettle Process from its status as the field’s central metaphor and/or model, all while opposing Cartesian internalism. (For her references to ecologies, see “The Domain of Composition” and Chapter 1 of *Composition as a Human Science*). And, Marilyn Cooper, whom I will discuss more fully in a later section, saw “Thomas Kent’s call for a ‘postprocess’ pedagogy . . . [as] a recognition . . . that composition studies still clings to a mechanistic rather than a systems view of writing” (“Foreword” xii-xiii). Likewise, in their early 2000s scholarship popularizing ecological views of writing, Weisser and Dobrin connected them directly to postprocess (Dobrin, “Writing Takes Place” 12; *Natural Discourse* 47). Scholars applying complex systems theory and/or chaos theory to writing instruction similarly demonstrate inter-connections between ecological and postprocess approaches (Kyburz, “Meaning” 510-11; Mays, “Writing” 560-63; Yood, “History”).

To justify my more controversial contention—that posthumanist theories of writing can also be considered postprocess—I will turn to three texts. The first two appear in an indirect interchange in *Beyond Postprocess* (2011) between Thomas Rickert and Collin Gifford Brooke, on one side, and Byron Hawk, on the other. In short, Rickert and Brooke argue that postprocess has been insufficiently attentive to the issues raised by posthumanism and suggest that it cannot be reformulated in a posthuman direction. In contrast, Hawk presents a reimagined (or, in his terms “re-assembled”) form of postprocess attentive to posthuman concerns. The third text, a 2012 dissertation written by Jennifer Rae Talbot, also supports the compatibility of postprocess and posthumanism, al-

though Talbot frames their relationship differently than Hawk. By her account, postprocess has cleared the conceptual space within composition and/or writing studies into which posthuman theories could emerge.

If the *Beyond Postprocess* collection has a central preoccupation, it is the relationship between postprocess and technology. To be more specific: contributors Byron Hawk, Jeff Rice, Collin Brooke and Thomas Rickert, Cynthia Haynes, and Raúl Sánchez all fault postprocess for its inattention to technology and/or materiality more generally. Haynes, for instance, notes a historical curiosity: “postprocess pedagogy emerged outside the concurrent introduction of computing technology and interactive (distributed) writing activities that inflected the peak historical moment of process pedagogy” (147-48). That is, one group of scholars began investigating postprocess while another simultaneously began studying computerized/digital/new media writing, but the twain never converged. For Sánchez, both process and postprocess “were conditioned to look past or through the technologies by which writing takes place” (188). A question then arises: would a postprocess that addresses such concerns still be postprocess? In their chapter, Brooke and Rickert answer in the negative. In his, Hawk responds affirmatively.

Brooke and Rickert begin by reiterating a “commonplace”: changes in technology produce changes in writing and rhetoric, and perhaps even in “the human being itself.” To address such changes in light of digital media, they assert, scholars of writing will need to “reorient” their activities “beyond postprocess,” given that “debates between process and postprocess have deflected attention from the material and technological changes that writing is undergoing.” In this account, both Process and postprocess hold inexorably humanist underpinnings (163). Although the authors admit that “postprocess theory does open up space for getting beyond humanism,” for them “it is hampered in advancing further by its humanist commitments to a linguistically mediated sociality that obscures more basic, even fundamental, relations to technology and materiality” (164).

If the discipline is ever going to address posthuman principles in a rigorous way, they suggest, it will need to move beyond postprocess. Postprocess theory’s commitments are too rigid and thus limiting to its future capacity/ies or adaptability. In particular, its further progress is inhibited by its particular notion of hermeneutic interpretation (165-66); its sense that publics are human (166); and even its limited, semantic conception of externalism, which implicitly excludes vehicle externalism—that is, models of the extended mind (167-69). Thus, they state, “Put as directly as possible, in the current postprocess paradigm, there is no room to theorize, much less to begin the questioning that would intimate that the world and its objects are essential to the ability to think, speak, write, make, and act” (169). There is no way to arrive at an ecological or posthumanist or new materialist vision of writing through postprocess, they contend.

If I might interject here, I am skeptical about this line of reasoning. I acknowledge that Brooke and Rickert arrive at their dismissal of postprocess from a separate but parallel intellectual lineage, what has come to be called the Third Sophistic. Thus, they can tenably claim to identify postprocess' conceptual blind spots and limits—and even claim to think thoughts that postprocess has not yet thought. However, postprocess differs from Process-era social constructionism—i.e., it is not just another “social” pedagogy—inasmuch as Kent stridently opposes the idea that “different conceptual frameworks supply us with unique and incommensurate ways of looking at the world” (*Paralogic Rhetoric* 79). Thus, if there is room to theorize posthumanist questions within a non-postprocess scheme, they must also be thinkable within a postprocess one or translatable (in)to it.

Furthermore, I would argue, a theory/method/mindset—however one might define postprocess—can evolve, and many do. Indeed, many are re-shaped, strengthened and enhanced by direct critiques of them. Once postprocess was criticized for failing to evidence posthuman approaches, it faced the opportunity to reformulate itself. Whether or not it would have come to do so is a question that could only be answered in the future (anterior). I find no compelling reason to suggest that postprocess could not be re-articulated to account for the elements that it had to that point ignored. Indeed, even despite their strident criticisms, Brooke and Rickert are forced to acknowledge that “postprocess theory does open up space for getting beyond humanism” (164). Likewise, before discussing “two ideas that . . . quickly and radically move us into fresh territory,” they are forced to concede that those very ideas “perhaps hav[e] a few ties to postprocess.” The first of these is that “technology, environs, and human being can no longer be conveniently or neatly distinguished” (169). So, even in their own argument, the possibility of a reconfigured postprocess appears and reappears. Rather than focus on what postprocess seems to deny, then, one might dwell on/in what it enables or what it might become.

In his contribution to *Beyond Postprocess*, Hawk offers a rationale for just this sort of reimagining by, in his eponymous phrase, “Reassembling Postprocess” through ecological and posthuman premises. However, as I will use Hawk’s work to ground my own re-articulation of postprocess, I feel compelled to acknowledge his sustained ambivalence toward postprocess. Just as 1980s-era cultural studies scholars accused “actually existing communism” of haunting (if not damning) their Marxist ideals, Hawk is ever careful to distinguish actually existing postprocess from “the promise of a postprocess paradigm” (“Reassembling” 81). In *A Counter-History of Composition*, he theorizes a “complex vitalist paradigm” for writing instruction that would offer “a focus on systems, dynamic change, complexity in both physics and the life sciences, an emphasis on situ-

atedness, and an acceptance of the un-conscious or tacit elements of lived experience” (224). When he employs the term *post-process* (always hyphenated) in *Counter-History*, he doesn’t differentiate Kent’s approach from the one employed by Libby Allison, Lizbeth Bryant, Maureen Hourigan, and the various contributors to *Grading in the Post-Process Classroom*—a work that never really tries to step “beyond” Process. Hawk also argues that Kent’s “dialectical approach to the social is still within Berlin’s social-epistemic rhetoric”—not something outside of the Process paradigm (221-22). Furthermore, following Diane Davis, Hawk frames Kent’s model of communicative interaction as insufficiently paralogic, not attentive enough to the otherness of the other, all of which makes him a “more traditional hermeneut” (222). Likewise, while affirming the efforts of Dobrin and Weisser to “push post-process further toward the concept of ecology,” Hawk laments their reliance on expressivist and social-epistemic approaches, which keeps them from “pushing the concept of ecology to its limits” (222-23).

So far as I know, Hawk never heartily endorses postprocess, even as presented by its leading theorists. And yet, in his contribution to *Beyond Postprocess*, he presents a surprising admission. After summarizing a “complex, super-linear sense of process” that might theorize “situatedness [as] more complex than traditional communication triangle models,” Hawk notes, “In [*Counter-History*] . . . I call this paradigm ‘vitalist’ for particular historical reasons, but as a paradigm or assemblage for our particular historical moment, postprocess works just as well” (81-82). There he affirms the possibility of a posthuman, vehicle-externalist postprocess. He credits postprocess with eschewing “universal and individual notions of the writing process,” but notes that its vision of writing as a public, interpretive, and situated phenomenon is “still grounded in a humanist tradition.” At the same time, though, he acknowledges that “postprocess theorists seem to desire” a way to “break out of traditional notions of the subject and process.” So, he offers a posthuman reinscription of Kent’s three pillars of postprocess: writing is public; writing is interpretive; and writing is situated. Hawk defines *public* in accordance with a new materialist or object-oriented ontology; *interpretation* as entailing Heideggerian “material embodiment” rather than simply hermeneutic guessing; and *situation* in line with a “Deleuzian ontology of assemblage” (75, 77). By rethinking postprocess in light of this “new constellation of concepts,” he aims to “reground postprocess in a posthuman model of networks to ultimately argue that the subject of writing is the network that inscribes the subject as the subject scribes the network” (75).

Quite crucially, Hawk frames his effort as a “rearticulation of [Kent’s] humanist position within the kinds of posthuman worlds rhetors inhabit today” and not as an argument with Kent. Or, as he affirms later, “This approach isn’t a refutation of Kent’s model of postprocess but an extension of his position

beyond the limits of his passing hermeneutical theory.” For Hawk, Kent’s work “sets the conditions for these possible futures within our field.” Other scholars might—and, I would venture, should— “continually reassemble it and see what future lines of thought and expression it makes possible in every new assemblage” (92). That postprocess had not (yet) been posthuman is not to say that it could not be(come) posthuman. Indeed, when one encounters an old text, one never encounters it in its original milieu but instead invariably opens up new textual possibilities. That is, “Rhetors can’t go back to Heidegger and have him be the Heidegger of the 1920s or 1930s. It will always be Heidegger in this moment, in this gathered assemblage.” And what is true of Heidegger is equally true of Kent and of postprocess: when, in 2011, “someone [say, Byron Hawk] writes about Kent circa 1999, it is no longer a Kent of the twentieth century, but, in this case, a Kent-Deleuze-Heidegger-Latour of this moment, in this edited collection, assembled with these other articles authors around postprocess and its matters of concern” (92). Of course, as I hope the reader will recognize, the transactive, reader-oriented and historically situated conception of textual meaning advocated by Hawk is characteristically postprocess.

While I think that Hawk’s argument, on its own, offers a solid basis for considering posthuman visions of writing to be postprocess, I would like to turn to one other text connecting the conceptual constellations: Jennifer Rae Talbot’s 2012 dissertation at Purdue University, *Re-Articulating Postprocess: Affect, Neuroscience, and Institutional Discourse*. (As an interesting historical footnote: Rickert was one of the co-chairs of Talbot’s dissertation committee, alongside Jennifer Bay.) In that text, as I have here, Talbot sidesteps difficulties posed by the “diversity of definitions, applications, and implications that have emerged under the term [*postprocess*]” (2). For her, the ambiguity of the term’s meaning(s) need not be a problem. Rather, she argues, “Growing ambiguity suggests that a theoretical term is actually doing important work to accommodate shifts in situation, and working through concepts and definitions in a complex and nuanced way” (154-55). And, furthermore, in a fascinating argument, she credits “the very contentiousness of the term” *postprocess* with “grant[ing] it the disciplinary traction” that it would need in order to endure (156). If the term had been more easily dismissed—or less obviously offensive (in both senses: violent and outrageous)—it might not have endured long enough to achieve its ultimate function.

For Talbot, “postprocess theory is most productively considered as a placeholder term within which a shift from humanist to posthumanist theories about writing continues to develop” (vi). Following Kent, she sees postprocess as an effort to “incorporat[e] a post-Cartesian subjectivity into rhetoric and composition.” But, because postprocess “is part of a broader cultural shift that is still tak-

ing place”—an incomplete and ongoing project—its meanings and associations cannot help but evolve, as well (2). Two key points emerge here. First, by Talbot’s account, the status of *postprocess* as a placeholder “does not at all mean that the term is empty—rather, it is [a] term that marks the space for something to become” (128). Second, Talbot follows the editors of *Beyond Postprocess*, who had also seen *postprocess* as a placeholder, rather than a signifier attached to an “easily defined moment or codifiable method.” However, whereas they had simply indicated that postprocess would open onto “something beyond,” Talbot identifies a conceptual destination: posthumanism (Dobrin, Rice, and Vastola 2).

Talbot explains the evolution of postprocess, as well as its relationship to Process in provocative and engaging ways. Just as I have distinguished between (social turn) post-process and (paralogic, externalist) postprocess, Talbot also identifies stages in the development of postprocess. In particular, she suggests that “notions of subjectivity are growing more complex through the progression from the social turn into postprocess” (123). In other words, she sees “social constructivism as a kind of proto-postprocess” inasmuch as it “broadens the conception of the writing subject to include social factors (21-22). Even while separating postprocess out from other “social” approaches, however, Talbot still frames postprocess as a “‘complex extension’ of process theory that is *still in progress*” (13).

For Talbot, much like Brooke and Rickert, Kent “makes an explicit but still insufficient move away from the Cartesian subject.” In her estimation, though, the problem is not so much that he disregards technology as that he disregards embodiment and affect (14). In particular, his version of triangulation (and, I would add, the *principle* of charity) is too reliant on “conceptual and linguistic models” that are “abstract and disembodied” (30). Even so, in a later text drawing from her dissertation research, Talbot concedes, “Each iteration of postprocess theory has more deeply integrated the role of affect and the body into the construction of the writing subject, and has more widely distributed the component elements of cognition” (“Pedagogy” 165). And so, Talbot ultimately lays postprocess theory “*alongside* developments in neuroscience, regarding each as an iteration of a broader cultural and philosophical shift” toward posthumanism, “or, more specifically, a shift from a situation model to an ecology of assemblage model” (155).

Throughout this book, I have labored to apply a consistent, clear, and simple definition of postprocess as an externalist, paralogic view of writing. Of course, externalism can take multiple forms, and I have focused on two: semantic externalism, which can account for the “what” of mental states, and vehicle externalism, which better accounts for the “how” of mental states. Without question, when Reed Way Dasenbrock, Russell Hunt, Thomas Kent, David R. Russell,

and the scholars I will discuss in the next section began “externalizing” composition scholarship, they primarily worked from semantic externalist principles. Still, in my estimation, their views are compatible with models of the vehicle externalism, colloquially known as the “extended mind.” To give but one example: Kent is more attentive to physical matter than he is often credited with being. Explaining the nature of externalism, he writes, “No split exists between our minds and the minds of others and objects in a shared world,” and he criticizes Stanley Fish’s view of interpretive communities because it “cannot account for objects in the world or the minds of others” (*Paralogic Rhetoric* 92, 79).

Furthermore, as Hawk and Talbot demonstrate, and as Rickert and Brooke reluctantly concede, early postprocess theories seem to call out for more and more fully externalist perspectives. Indeed, as Marilyn Cooper has admitted, scholars had to “struggle to see relationships as primary, rather than focusing on—especially on—the human actors relating to human and nonhuman others, and even harder to see writing as part of a whole, interrelated, ceaselessly changing environment” (“Foreword” xiv). Arriving at conclusions that may now seem obvious was far from easy; doing so required considerable, sustained, collective effort. Ultimately, I agree with Talbot’s argument: semantic externalist (postprocess) arguments helped prepare a space in which subsequent vehicle externalist (but still postprocess) ones could be accepted. And, I would also affirm Hawk’s central claim: the core tenets of postprocess can be reconfigured to be(come) posthuman. Therefore, I believe assimilating ecological and posthuman theories of composition into the rubric of postprocess does justice to all three distinct discourses.

HOW INVENTION BECAME POSTPROCESS: THE GRADUAL ACCEPTANCE OF EXTERNALISM

In this section, I examine early externalist works to construct a genealogy of contemporary inventional theories. In the process, I hope the reader may note the degree to which disciplinary “common sense” has shifted during the last thirty years. While the externalism advocated in early works once had to be justified strenuously, many current texts simply presuppose it.

The first major wave of scholarship on externalist composition began in October 1985 with Reither’s “Writing and Knowing,” which carries the subtitle “Toward Redefining the Writing Process.” In that text, Reither demonstrates the inter-animating and co-constitutive roles of writing and its context, noting, “Writing is not merely a process that occurs within contexts. That is, writing and what writers do during writing cannot be artificially separated from the social-rhetorical situations in which writing gets done, from the conditions that

enable writers to do what they do, and from the motives writers have for doing what they do.” And, furthermore, he contends, “Writing is, in fact, one of those processes which, in its use, *creates* and *constitutes* its own contexts” (621).

Reither concedes that Process research “has taught us so much.” But, given this strength, it has also “bewitched and beguiled” scholars into accepting a “truncated view” of writing as “a self-contained process,” one which “begins naturally and properly with probing the contents of the memory and the mind” (622). In contrast, Reither notably identifies writing as “a more multi-dimensional process” than had been commonly imagined. He also asserts that the process in question “begins long before it is appropriate to commence working with strategies of invention”—thereby identifying a conceptual lack in prior intentional schemes. He therefore encourages other scholars to develop a different theory of process, one operating at a different scale. He states, “The ‘micro-theory’ of process now current in composition studies needs to be expanded into a ‘macro-theory’ encompassing activities, processes, and kinds of knowing that come into play long before the impulse to write is even possible” (623).

In “Writing and Knowing,” Reither focuses primarily on the classroom utility of his preferred pedagogical method, collaborative investigation, and only briefly gestures toward an externalist vision of invention. In contrast, his presentation at CCCC 1986, “Academic Discourse Communities, Invention, and Learning to Write” directly critiques the dominant intentional theories of the time. According to Reither, “If the current textbook advice of our discipline reflects up-to-date belief, compositionists appear to view invention as a strictly private, individual, cognitive act rather than a socio-cognitive, intersubjective act” (9). Throughout the course of that presentation, though, Reither examines the “reciprocal” relationship between two primary “levels” of academic discourse communities, the workshop and the discipline. By his estimation, the discipline “*authorises* the activities of the workshop, and in so doing both *drives* and *constrains* it”; in contrast, the workshop “*feeds* and *shapes* the discipline” (4-5). That is, the established knowledge base and acceptable research methods of a discipline dictate what can be studied and what can be said about those objects of inquiry. But, what individual researchers identify in their research and argue in their scholarship can, of course, re-shape what is known and accepted by the collective body of scholars in the discipline. Thus, the *workshop* and *discipline* are not places but rather “rhetorical situations or states of mind,” defined primarily by “what disciplinary activity [the scholar] is engaged in at the moment”—whether they are evaluating the ongoing conversation or attempting to enter into it (7).

In recognizing the reciprocal relation between discipline and workshop, Reither is forced toward a conclusion regarding invention: workshop writers “get [their] information, ideas, [and] arguments . . . interactively, out of [their]

transactions with knowledgeable peers and superiors in our workshops and in the discipline's literature. We do not—we cannot—get them in circumstance of conversational dissociation from others" (9). He offers an externalist vision of cognition by quoting from Clifford Geertz, who suggests that human thought amounts to "a traffic in what have been called . . . significant symbols—words for the most part but also gestures, drawings, musical sounds, mechanical devices . . . or natural objects" and, furthermore, "from the point of view of any particular individual, such symbols are largely given." One's cognitive apparatus draws from an array of external objects and symbols that one neither creates nor controls, and so "thinking is always thinking *in terms of* and *in relation to* others' thinking" (11). And, working from these premises, Reither affirms, "Invention cannot be a strictly private act"; it "cannot occur in a social vacuum" (10-11).

James E. Porter would also publish an externalist-leaning inventional theory in his 1986 "Intertextuality and the Discourse Community." Porter argues directly against those who would "teach writing only as the act of 'bringing out what is within,'" contending that to do so is to "risk undermining our own efforts" (42). Notably, he borrows the phrase "bringing out what is within" from David Bartholomae, and thus the obvious reading of that phrase in its "original source" would seem to be as a critique of expressivism. However, I think that Porter aims at something more ambitious: a critique of the internalism on which expressivism (typically) relies. Throughout his article, he demonstrates the interdependency of all texts, insofar as none can exist without precursors, nor can readers understand texts without background knowledge. He also privileges the role of situation and audience in expression, arguing, "In essence, readers, not writers, create discourse" ("Intertextuality" 34, 38). Even so, Porter is careful to avoid an (and perhaps *the*) "extreme" interpretation of post-structuralist thought: that the author is so thoroughly constrained by external factors that she or he has no remaining agency. He acknowledges that writers "are constrained insofar as we must inevitably borrow the traces, codes, and signs which we inherit and which our discourse community imposes." But, in the next breath, he also foregrounds the role of the author: "We are free insofar as we do what we can to encounter and learn new codes, to intertwine codes in new ways, and to expand our semiotic potential" (41).

In 1987 Karen Burke LeFevre would offer the most detailed and explicit analysis of socially conceived invention to date—both then and now. In the first "body" chapter of *Invention as a Social Act*, LeFevre enumerates the features of the conventional, Platonic (i.e., introspective) vision of invention. Then, in the following one, she explains what it means to conceive of writing in three other ways: as social; as dialectical, in the sense that the individual and the social collective are "coexisting and mutually defining"; and as an act. She identifies the

first canon as both a finding and a making of subject matter and further asserts: “Invention . . . is, I think, best understood as occurring when individuals interact dialectically with socioculture in a distinctive way to generate something (2, 33). LeFevre places a concerted emphasis on the multiplicity of human actors within the inventional schema and exhibits comfortability with open-ended indeterminacy. In her model, one aims to generate “something,” though its nature remains unclear and possibly unknowable.

Given the increased complexity LeFevre attributes to it, invention no longer appears as an appropriate task for a single writer. It necessarily becomes an act in which individuals commune—either mediated by texts or more directly, through dialogue. Subsequent scholars would identify even LeFevre’s model of invention as too narrow—particularly for its anthropocentrism and its privileging of conscious intention over contingency and accident. However, her work nonetheless marks an important transformation in the discipline: the last gasps of one paradigm and the birth of another.

LeFevre’s vision of the social appears to have derived from (internalist) collaborative learning scholars (121), but she herself points toward the next major development in inventional research—an (externalist) ecological understanding. In her conclusion, she writes, “We should study the ecology of invention—the ways ideas arise and are nurtured or hindered by interaction with social context and culture” (126). Subsequent scholars likely would not have arrived at (or, at the very least, accepted) these more complex conceptions of invention without first extending the definition one crucial removal—from the individual to the group.

LeFevre’s turn toward an ecological approach occurs both hastily and very late in her text; in contrast, in her 1986 “The Ecology of Writing,” Marilyn Cooper would investigate the ecological components of composing in a much more extensive and rigorous fashion. And, insofar as her ecological model explains where ideas come from, it is a theory of invention at its core. She begins her foundational article, “The Ecology of Writing,” by asserting that “the time has come for some assessment of the benefits and limitations of thinking of writing as essentially—and simply—a cognitive process” (364). While she acknowledges the “undoubtedly beneficial changes” brought forth by cognitive models, she immediately criticizes them for “blind[ing] us to some aspects of the phenomena we are studying.” The problem, she argues, “has nothing to do with [the model’s] specifics.” Instead, the problem with cognitivism is “the belief on which it is based—that writing is thinking, and, thus, essentially a cognitive process.” This viewpoint “obscures many aspects of writing we have come to see as not peripheral” (365). Her work would, then, attempt to illuminate (or, un-obscure) the nature and functions of those non-peripheral but conventionally ignored elements. More precisely, she opposes depictions of the author as isolated and/or solitary, working “within the

privacy of his own mind” (365). Cooper asserts, instead, that the primary tools of thought—languages and texts—are themselves socially constituted (or what Bakhtin would call dialogic): words carry with them the traces of their prior application. No one can have an idea without relying upon, extending, or contending with the thoughts and ideas of others (369). Cognition is, in short, inherently and inexorably distributed. Therefore, she reasons, “Language and texts are not simply the means by which individuals discover and communicate information, but are essentially social activities, dependent on social structures and processes not only in their interpretive *but also in their constructive phases*” (366, emphasis added). Invention, too, has social elements. Writing does not *become* social in being shared; it is (to bring back a term from the 1980s) always already social: “Ideas result from contact. . . . Ideas are also always continuations. . . . In fact, an individual impulse or need”—to write, for instance, “only becomes a purpose when it is recognized as such by others” (369).

The term *social* does appear frequently within Cooper’s text, and, as I’ve discussed in this book’s Introduction, her work was somewhat unsurprisingly filtered into the scholarly conversations on social constructionism and discourse communities. It’s worth pausing, then, to explain briefly what Cooper seems to have seen as the major implications of her work. While she admits an apparent similarity between an ecological conception of writing and what was then called a contextual approach, she carefully delineates their distinctions. Contextual models, she suggests, “abstract writing from the social context in much the way that the cognitive process model does,” treating a given context as though it were “unique, unconnected with other situations” (367). While contextual models, like the Burkean pentad, may be useful for categorizing situational elements, they are less useful for demonstrating the causal relations between situations. “In contrast,” she argues, “an ecology of writing encompasses much more than the individual writer and her immediate context” (368).

An ecologist explores how writers interact to form systems: all the characteristics of any individual writer or piece of writing both determine and are determined by the characteristics of all other writers and writings in the system.” And, furthermore, an ecological model sees all of these elements as being “inherently dynamic.” While these “dynamic interlocking systems” may pre-exist a particular act of writing, they “are not given, not limitations on writers; instead they are made and remade by writers in the act of writing” (368). And, Cooper writes in a forceful, concise sentence, “Furthermore, the systems are concrete.” That is, stated differently, “they are not postulated mental entities, not generalizations” (369). They have physical presence. One can point to (at least some) of their elements or aspects. Ultimately, Cooper wishes to re-conceive both the writer and writing itself. In place of the cognitivist “solitary author,” the ecological model

would project “an infinitely extended group of people who interact through writing, who are connected by the various systems that constitute the activity of writing.” And, in place of the cognitivist view of writing “simply [as] a way of thinking,” it would posit writing as “more fundamentally a way of acting” (374).

Ecological theories figure invention less as a bringing forth of resources out of oneself (the individualistic, internalist definition) or even out of a group of people (the social or collaborative view) but imagine the canon’s functions more rhizomatically. That is, ecological theorists ask which resources can be connected to the self, either ephemerally or indefinitely, in order to produce some sort of novel item, to assemble a set of pre-existing items for alternate usage, or even to rearticulate a given object in wholesale fashion for an alternate purpose. The resources that one might employ are practically limitless, they assert, and the writing process functions best when one acknowledges and responds to the indefinitely many affordances and constraints that existence accords her. As a result, a common trope of recent scholarship is that one’s historical predecessors did not externalize their theories *enough*. Expressivists were purportedly too concerned with the self; collaborative learning enthusiasts and even early ecological thinkers were purportedly too concerned with human actors (c.f., Syverson, *Wealth* 24, criticizing Cooper); though relying on complexity theory some other ecological theorists didn’t make their works complex enough (c.f., Hawk, “Toward a Rhetoric” 846, criticizing Syverson); and some depictions of ecology fail to trouble the subject-object distinction adequately and to recognize the role of attention in determining the salience of ecological factors (Rickert, *Ambient Rhetoric* xi-xii).

While attending to situated, contingent variables, ecological composition also posits uncertainty and precarity as both inputs and outputs of the writing process. In Mark C. Taylor’s words, “The moment of writing is a moment of complexity”; it is comprised of an indeterminate number of connected parts, some of which act sequentially while others act in parallel fashion. Most importantly, the self-organization and interaction of parts within complex networks produce effects which “are not necessarily reducible to the interactivity of the components or elements in the system” (198, 172). That is, because it is complex, one cannot predict the outcome of writing by assessing or measuring ingredients as one would when baking a cake; the process is substantially more chaotic. No process can guarantee the production of a given, desired result. In this light, the postprocess mantra that writing cannot be taught but can be learned—each time, anew—is more readily understandable (c.f., Olson, “Why Distrust” 426; Kent, “Principled Pedagogy” 432).

Ecological composition and posthumanism are similarly indebted to methods of systems-thinking, especially cybernetics, and the distinction between

their approaches is largely a difference in emphasis, with the latter studying the body itself more closely and privileging the role of technology more heavily. Many of the best ecological thinkers hardly discuss IT; for instance, the word *technology* does not appear in Cooper's text at all. In contrast, one's relation to technology is the primary philosophical question posed by certain posthumanists. As N. Katherine Hayles notes, "The posthuman implies not only a coupling with intelligent machines but a coupling so intense and multifaceted that it is no longer possible to distinguish meaningfully between the biological organism and the informational circuits in which the organism is embedded" (35). But, of course, any spectrum has an indefinite number of middle points. Thus, one should not be surprised when Collin Gifford Brooke frames his efforts in *Lingua Fracta* as an effort to "reimagine the [rhetorical] canons ecologically and technologically" (28). Likewise, at the end of *The Wealth of Reality* (subtitled *An Ecology of Composition*), Syverson notes, "The understanding we gain from studying composing situations as complex ecological systems should help us as we consider the changes wrought by new technologies" (*Wealth* 205). For her, after all, a complex writing ecology would include, at minimum, five inexorably interconnected dimensions: the temporal, the spatial, the psychological, the social, and the physical-material—which includes technology (18-22).

Both models, ecology and posthumanism, base their arguments concerning writing on a conception of mind: cognition as a necessarily plural act (or response, or interaction), accomplished by an indefinite number of human and non-human actors that have become localized and functional in collaborative effort. As even the name of the field, posthumanism, suggests, to imagine thought in this way is, to a very large degree, to reconceptualize the nature of personhood, such that many of the most common phrases no longer seem apt. One is not simply a subject but also an object, both actor and acted upon; nor is the subject/object simply or solely human, given its what-externalism and sometimes literal incorporation of technological artifacts (e.g., pacemakers, anti-depressants, or even headache medications). Posthumanism, like ecology, is a disavowal of boundaries, and John Muckelbauer and Debra Hawhee therefore define it as "an attempt to engage humans as distributed processes rather than as discrete entities" (768). Via the *topoi* or "places," intentional theories hold a long-standing relationship to spatiality, but when humans link up with connected informational devices, and especially when they enter into and/or co-construct cyberspace, they encounter immaterial environments with "the potential for a complete reimagining of invention," ones that are, as Jeff Rice notes, "layered, confusing, and constantly changing" ("Networked Boxes" 305). Through a form of wired (or, increasingly, wireless) how-externalism, the mind traverses an indefinite number of informational circuits more or less simultaneously and

conducts complicated operations with previously unthinkable rapidity. One cannot generalize about how ideas emerge in such contexts, except to say that their origins extend outside the writer's own skull.

EXTERNALIST INVENTION IN PRACTICE: RIP-MIX-BURN AND ASSEMBLAGE

Ecological and posthuman theories of composing are not theories of the first canon so much as theories involving or affecting it. One would be more accurate in calling them theories of the (necessarily plural) inventing actors or actants. Much like other branches of postprocess theory, neither offers much in the way of positive approaches to creation or discovery; they are post-pedagogical in that their tenets seem to deny the possibility of universal or even generalizable directives. Because they value connectedness and relationality so seriously and thereby deny the autonomy of the mind, neither asserts that one inventional success can serve as precedent for any other. Put simply, the conditions enabling a given invention will never emerge again in precisely the same form. By Brooke's estimate, though, the value of ecology lies precisely in "its ability to focus our attention on a temporarily finite set of practices, ideas, and interactions" without concerning itself with their stability or recurrence (*Lingua Fracta* 42). A given method or pedagogy is not transferable or portable to other contexts; *kairos* reigns. Yet, *kairos*, now understood as a spatio-temporal situation in which a rhetor is enmeshed and from which her or his actions cannot be isolated, does not negate the art of invention but instead serves as its ground (Rickert, *Ambient Rhetoric* 77-78, 82; Hawk, "Post-Technê" 381). Stated more directly: *kairos* enables invention; invention does not find or encounter or stumble into *kairos*. Of course, from an externalist perspective, every inventional act is caught up in its own surroundings by default, inasmuch as no mind can think in isolation. Figuring invention as a combination of "consciously taught elements" (e.g., *topoi*, pre-writing) and responsiveness, Hawk therefore contends that one must engage in "continual, situated invention—that is, remaking techniques for every new situation." If one could articulate a postprocess model for invention, it would be this: new each time, constantly evolving in response to situational constraints ("Post Technê" 388-89).

Postprocess theory has earned a reputation for being abstract, vague, inapplicable—even nihilistic in disavowing the writer as subject of the writing act. And, of course, such views are not necessarily unfair. Even its defenders have been forced to concede, as Breuch does, that postprocess theory suggests few "concrete assignments or classroom environments" (127). To many compositionists, especially those favoring certainty and mastery, a command of conventions and rules, the theoretical advances offered by ecological and posthuman

accounts may seem to present theoretical surrender or decline. But, I want to argue the opposite: the greatest contribution of these models may be their “re-valuing of partiality” (Brooke, “Forgetting” 791). Inventions (both rhetorical and otherwise) reconfigure the nature of existence, and in so doing change what one might imagine or expect. Francis Bacon, the English statesman, scoundrel, and scholar (not to be confused with the twentieth century painter of the same name) states this matter well: “*Ars inveniendi adolescit cum inventis*,” that is, the art of invention grows with inventions (741). Taking for granted its situated status and provisional nature, an acknowledgement that one cannot control the inventional process, then, seems to me a more intellectually honest approach. In foregrounding contingency, profound uncertainty, randomness, and openness, and in learning how to enable, channel, or direct forces beyond one’s direct control, the writer allows herself to be re-written, re-wired, re-paired.

The preceding pages seem to suggest that the art of invention is dead while the practice—and, even more importantly, the experience—of invention is alive and well. The latter parts are certainly true, but the former is not necessarily. Postprocess approaches do not deny the utility of pre-writing, or heuristics, or the Burkean pentad but provide a more complex appraisal of their operations and a more robust framework for their application in particular instances. And, furthermore, models for posthuman and/or ecological invention already exist. Believing that digitally networked writing ecologies are here to stay, I would like to focus on two promising, contemporary approaches to invention that might serve as examples for future inventional innovations: Alex Reid’s rip-mix-burn approach, which draws heavily from Gregory L. Ulmer’s prior theorizing, especially his 2003 textbook, *Internet Invention*; and Johnson-Eilola and Stuart Selber’s notion of the assemblage. Since each approach presupposes externalism and relies upon ecological and/or technological affordances, neither can present universal prescriptions for pedagogy. Even so, each illustrates the applications of an inventional theory attuned to its environs.

While introducing the un-hyphenated term *postprocess* in her 1994 book *Literacy, Ideology, and Dialogue*, Irene Ward notes, “Recently, several compositionists have challenged the process paradigm, attempting to institute a postprocess, postmodern pedagogy” (129). More specifically, Ward refers to Gregory L. Ulmer, William A. Covino, and Kent. In a subsequent sentence, though, Ward designates Ulmer and Covino as being *postmodern* scholars and singles out Kent as the *postprocess* one. I believe that Ulmer’s work also deserves the latter appellation, though. Because his theorizing attends so carefully and commonly to invention, now seems an appropriate time to turn to it.

Ulmer primarily derives his principles from French post-structuralist philosophy, especially the works of Roland Barthes and Jacques Derrida, and so the

particular lexicon he employs differs considerably from Kent's Anglo-American analytic one. Even so, his work clearly presumes an externalist conception of mind and denies that writing arises primarily from directed, intentional, conscious action (and thus that it can be taught, at least as *teaching* is typically conceived). Thus, it can and should be considered postprocess, according to the stipulative definition I am applying. His thinking on invention also directly aligns with my analysis in this chapter. In his 2003 textbook, *Internet Invention*, Ulmer explicitly states, "Invention is an ecological process" (27).

Postprocess and/or postprocess-compatible tenets form the groundwork of Ulmer's two primary inventional schemes, *heuretics* and *chorography*, which have been variously applied by a host of subsequent scholars, including Caddie Alford ("Creating"), Sarah J. Arroyo (*Participatory Composition*), Hawk ("Hyper rhetoric"), Michael Jarrett (*Drifting on a Read*), Jeff Rice (*The Rhetoric of Cool*), Rickert ("Toward the Chōra), and Madison Percy Jones ("Writing Conditions"). Ulmer's persistent efforts to rethink traditional (or classical) rhetorical theories for the age of electronic media (or what he has called the *electrate*, as opposed to the literate, apparatus) have also informed Brooke's work in *Lingua Fracta: Toward a Rhetoric of New Media*, most notably his theorizing of a *proairetic* approach to invention (which I examined in Lotier, "Around 1986" 375-76).

In simple terms, *heuretics* is a specific approach to reading, which differs considerably from the more common hermeneutic approach. As Ulmer points out, hermeneutic interpretation is oriented toward answering the question, "What might be the meaning of an existing work?" In contrast, *heuretic* invention asks, "Based on a given theory, how might *another* text be composed?" (Ulmer, *Heuretics* 5). Thus, in the words of Michael Jarrett, it "push[es] reading (consumption) so far and so hard that it [becomes] writing (production)" ("Elvis" 144). In many respects, *heuretics* resembles what Muckelbauer has elsewhere called "productive reading," a "style of engagement . . . [that] reads in order to produce different ideas, to develop possible solutions to contemporary problems, or, as importantly, to move through contemporary problems in an attempt to develop new questions" ("On Reading" 73-74). As Muckelbauer points out, scholars demonstrate a (largely unexamined) tendency to refer to interpretive or critical texts as "readings" of prior works. Thus, he concludes, "Although reading and writing are different activities, common usage demonstrates that this difference is not reducible to the logic of consumption (reading) versus production (writing)." Rather, quite importantly, "the former practice [reading] is inventive while the latter [i.e., writing] is not an invention ex nihilo" (93).

Ulmer acknowledges the medieval origins of *heuretics*; it is a mode of reading as well suited toward scribal or print-based texts as electronic ones. However, he frames *chorography* "specifically [as] an *electronic* rhetoric" (*Heuretics* 34).

It follows the “associational,” linking logic of digital texts by playing upon the materiality of language. For instance, one of its characteristic tactics involves employing all the various meanings of a word, rather than selecting just one of them. In other words, it uses puns as though they were hyperlinks (34, 48). A chorographic author thus “has a different relationship to language and discourse,” as compared to conventional conceptions; “it is that neither of writer nor reader but of ‘active receiver’” (38).

While Ulmer occasionally pauses to consider the conceptual underpinnings of his models, his texts are often more literary and/or performative than they are explanatory; he aims to invent an electronic rhetoric by applying its principles, instead of merely contemplating what they might entail. Theorists working from his tenets have demonstrated their externalism in direct terms, though. Jarrett, for example, demonstrates that terms and concepts (what Ulmer calls “premises,” while noting the pun of terrain and argumentative logic also present in the Greek *topoi*) offer the materials that we “reason with, and through.” And, from Jarrett’s perspective, Ulmer’s chief insight is that “only by making [our premises] explicit, by putting our premises into the writing apparatus and thus external to our minds”—or, I would suggest, within the extended purview of our externalized minds—“can we perceive how they function” (“Elvis” 244). In Rickert’s words, chorographic models “attribute inventional agency to non-human actors such as language, networks, environments, and databases” and thus “transform our sense of what is available . . . as a means for rhetorical generation” (“Towards the Chōra” 253). As I’ve previously noted, Rickert himself might not characterize choric inventional schemes as *postprocess*. But, they are quite clearly externalist—and thus postprocess according to my own classificatory scheme. They deny the existence of a “clear demarcation of ‘in here’ and ‘out there’”—that is, a separation between mind and world—and demonstrate that invention does not result from “following a method, in some linear sense, but [from] being immersed in, negotiating, and harnessing complex ecologies of systems and information” (253).

Before proceeding onward, I would like to focus on one last application of Ulmer’s inventional thinking, the rip-mix-burn approach that Alexander Reid theorizes in *The Two Virtuals* (2007). For what it’s worth, Reid credits Ulmer with having (pre-emptively) applied his rip-mix-burn approach in *Internet Invention*. But, because it is more a perspective on cognition and invention than an inventional approach or method *per se*, I would separate it out from both heuristics and choragraphy.

In my estimation, Reid’s work represents the earliest fully articulated approach to vehicle-externalist composition pedagogy, one that “account[s] for the radical exteriorization of the subject” and “the rhizomatic distribution of the

compositional process” (*Two Virtuals* 24). He does not, however, categorize it as *postprocess*, and he actively rejects calling it *post-process*, for entirely reasonable reasons. In a 2007 blog entry, Reid acknowledges “many varieties of post-process composition,” which represent “the various ways that rhet/comp scholars have moved beyond, built upon, and/or rejected the dominant writing process school of thought.” However, he specifies that, for him, “post-process is a recognition of the social and cultural dimensions of writing.” It draws from “Berlin’s social-epistemic rhetoric,” which is “strongly Marxist,” and also “represents the impact of Foucault and cultural studies on our understanding of the role of ideology/power in discourse and representation.” This definition, I would note, accords very closely with my own usage of the term to denote the “leftwing trajectory of the social turn.” While Reid acknowledges that his own scholarship is “post-process in the sense that I continue to teach writing by asking students to study writing, both the object and the practice,” he also places himself outside of that category. Indeed, even more strongly, he states, “I’m thinking about writing in a way that’s really not even in a category of composition theory as far as I know” (“[post-] post-process composition”). That assessment may strike some readers as hyperbolic. I myself find it fair and tenable. Hawk’s efforts to re-articulate a vehicle-externalist definition of postprocess, which has informed my own thinking about what is and is not postprocess, was published four years later. In 2007, so far as I know, there really *wasn’t* a term for what Reid was doing. I am applying my own label to it retro-actively.

As I’ve previously mentioned, Reid doesn’t present rip-mix-burn as an approach to invention; like posthumanism and ecological composition, it’s really more of a broad theoretical disposition with ramifications for (what used to be called) *invention*. As Reid is forced to concede, it represents an “approach to composition in which one can articulate a process, replete with mechanisms, but do so without reducing writing to a discrete set of practices. That is, unlike invention, arrangement, and revision, ripping, mixing, and burning are not steps, not even recursive steps” (*Two Virtuals* 143). Some readers will no doubt recognize, *ripping*, *mixing*, and *burning* as the terms used to describe a specific, nebulously legal but commonplace early 2000s process: taking music from one physical manifestation, such as a legitimately purchased compact disk (ripping); arranging various ripped songs into a specified order (mixing); and then moving the new collection of tracks to another, specially purchased, “burnable” CD (burning). Taking these terms from their original, narrow meanings and applying them to “composition in a broader sense,” Reid writes,

Ripping describes the practice of pulling on informational resources whether they are sensed, remembered, or from

some pre-existing media; *mixing* then describes the process by which this ripped data connects in a rhizomatic network where each new connection holds the potential for unexpected mutation; finally, by *burning* the composition, the mixture of data becomes compressed into a material form that can be communicated across a network. In this way, the process can begin anew. (18)

From his perspective, all writing derives from these practices. But, equally importantly, he reasons, “There is no cognition except this kind” (130). All thought is embodied and distributed across a technological apparatus—including though hardly limited to symbol systems like writing.

Reid’s perspective has serious ramifications for what was formerly called invention—and for writing more generally. By his account, nothing that might be construed as a “creative” action comes from nowhere; any new text arises, whether in part or in whole, from a selection of pre-existing elements: ripping should be construed as “integral to the composition process and thus unavoidable” (133). Rather than imagine ripping as the original act(ion) of writing, though, Reid frames it as something that “creates conditions” for novelty to emerge, especially as pre-existing elements are mixed, “creat[ing] the possibility for information to flow from one into the other causing mutation” (130-31). Something new and interesting might emerge in this process, of course, but in crediting its creation to an individual human, Reid suggests that one should not “mistake the legal fiction of authorship, necessary for copyright and the media marketplace, with the material processes of composition, which indicate that thought and creativity are processes distributed across culture and technologies” (8). He thus suggests that any pedagogy accepting a rip-mix-burn logic would need to rethink its definitions of plagiarism (133). And, in this way, his thinking aligns with that of Johnson-Eilola and Selber.

In “Plagiarism, Originality, Assemblage,” Johnson-Eilola and Selber trumpet the virtues of the assemblage, a distinctly postmodern medium, which makes no distinction whatsoever between “invented” and “borrowed” content (375). The name of this concept seems to impend doom for the first rhetorical canon (as traditionally imagined), insofar as it implies a privileging of assembly over and against invention. Of central importance, if one considers the assemblage to be a valid form of writing, then one acknowledges that students may write productively without producing anything new at all. Even so, this allowance does not necessarily lead to the death of invention altogether—as though such a thing were possible; instead, as with all forms of writing, this mode carries with it its own theory of creation. In producing an assemblage, the primary

role of the writer is to distribute; invention is secondary and, in some instances, either incidental or non-existent. But, as information economist Fritz Machlup demonstrated so long ago, information distribution is its own kind of production (*Production* 7). Because ideas lack material form, they are endlessly reproducible at effectively zero cost. Thus, in a very real way, each new idea that a given person learns adds to the sum total of existing ideas in the universe. But, from a less economic and more rhetorical perspective, one might also note that, through each situational re-deployment, an idea is born anew. Fitting a concept to its kairos is an artistic act, and that idea really is different—even new—each time it rediscovers and reasserts its force.

Extending a robust discourse on plagiarism and ownership in student writing that has thoroughly unsettled inherited notions of textual originality and borrowing/theft, Johnson-Eilola and Selber contend that the distinction between these two poles is “not only problematic but also counterproductive” (376). They therefore attempt to imagine a pedagogy—and, more broadly, a form of writing—that would elide the difference. In so doing, they reconceive the value of information production and distribution, privileging “effect in context,” what a work does, over “performance,” or how it was created. Johnson-Eilola and Selber state, “Creativity, in this rearticulation, involves extensive research, filtering, recombining, remixing, the making of assemblages that solve problems” (400). The success or failure of a work, becomes something that, at best, an instructor cannot judge alone and, at worst, cannot judge at all. The value of the work must be found in its operations with(in) the world, not in the sophisticated and elegant (though largely hypothetical) brilliance of its machinery.

Given the massive repository of information that new technologies make available, students often have perfectly good reasons for re-purposing other people’s ideas, rather than generating their own. Selber and Johnson-Eilola therefore urge instructors to profit from this development, rather than blindly opposing it out of habit. Instead of always pushing students to develop “fresh insights” (or whichever term is fashionable at the moment) one might offer lessons on how to find good, reusable content—which is not so very different from teaching one to cite sources, ultimately, except that it does away with the false premise that those one credits themselves worked alone. Or, as Jim Ridolfo and Dànielle Nicole Devoss demonstrate, one might instruct students on how to contribute to or otherwise enhance the networks in which and of which they partake by producing re-workable content for others to engage (“Composing for Recomposition”). In sum, to practice the art of invention, one need not imagine the writer as the source of all ideas, original though some may seem. Externalization hardly represents the demise of the first canon. Instead one might see a student writer as a node in a more complex network, one through whom ideas pass, and one

that alters or enhances many of them, one who both draws from and contributes to the overall ecology.

Eric Charles White articulates the thesis of his *Kaironomia: On the Will-to-Invent* in simple terms: “Invention must constantly be renewed” (8). Emphasizing the centrality of *kairos*, the opportune moment, he suggests that each rhetorical situation is unprecedented, wholly unique, and therefore those hoping to persuade cannot rely on precedent (13-14). A “systematic treatise on the management of the opportune” could never exist, he argues (20). But, even for those less inclined to believe in the radical singularity of the now, his thesis would seem to bear weight. Old methods lose their force; the world changes; new ways of being and living and thinking emerge; and all of these must have some impact on communicative practices. Invention must be renewed. It remains in a state of becoming, tethered somehow to and yet remaining indistinguishable from the nature of its constituent electracy, which is itself birthing and being born. Whatever invention will be, it is presently being and becoming; if you want to see it, look within you, or around you, or in the in-between.

CODA: BUT, WHAT IF WE DON'T (NEED TO) CALL IT *INVENTION*?

In this chapter, I have traced a rupture in inventional thinking that very few scholars—except those contributing to it—and perhaps even some of them—recognized while it was occurring: a shift from internalist assumptions to externalist ones. When I began writing the first version of what would become this chapter, sometime in the winter of 2014, I did not (so far as I can recall) yet know that postprocess was a thing that existed. I had, presumably, read the term here and there; I know, for example, that I had already read Dobrin’s *Postcomposition* and my grad-school cubicle-mate’s copy of Hawk’s *Counter-History*, both of which use the term. But, I had never seriously considered postprocess as a disciplinary movement or the ramifications that it might provoke.

At that time, I had set myself a relatively clear task: to write a history of inventional thought from the 1970s to what was then the present day. To do so, I scoured disciplinary databases for articles with *invention* as a keyword, and I read them all. I had not yet read Lauer’s “Rhetorical Invention: The Diaspora,” and so I did not yet know that 1986 marked the year in which inventional research became increasingly hard to find. But, as I compiled an archive, I reached a similar conclusion on my own. I had an advantage (a technological affordance) that Lauer did not when she wrote her 2002 chapter, though. I had the ability to track citations, moving forward in time. I could start with a canonical text on invention, say, Richard E. Young’s “Arts, Crafts, Gifts, and Knacks,” then deter-

mine quickly every text that had ever cited it. What I found was something quite like what Lauer herself found: that scholarship on rhetorical invention moved into a diaspora. But, what I found differed from her account in one crucial way: I discovered a number of authors who were citing inventional scholarship but who didn't, at first glance, appear to be talking about *invention* at all. At minimum, many of them weren't using the word. Instead, they talked about *posthumanism* and *materiality* and *ecologies*.

They had shifted their vocabularies.

I didn't yet have a framework for making sense of how important that shift might be. I didn't yet know that postprocess might be defined most aptly *as a vocabulary*. I didn't understand why theorists might *relexicalize*, swapping one set of terms for another. But, I registered the change in terminology all the same.

At the end of this chapter's previous section, I elected to repeat the sentence that concludes an earlier version of this account (i.e., Lotier, "Around 1986"). That sentence reads, "Whatever invention will be, it is presently being and becoming; if you want to see it, look within you, or around you, or in the in-between." I still mostly agree with that sentiment. But, with a bit of historical distance, I would like to affirm another point, as well. Yes, whatever (what we once called) invention will be, it is presently being and becoming. It is being renewed, reconfigured, recomposed. What has conventionally been called the First Canon is evolving, as we reconsider our notions of what the mind is and how the mind works and as new technologies emerge that reconfigure the possible and the imaginable.

But, this time around, I want to say something a bit stronger: *invention* may no longer be the best word to characterize that particular aspect of writing, of what we used to (and still do) call *the writing process*. Indeed, if the postprocess thinking that I have examined in this chapter proves anything, it's that we don't *need* that word. It's not (always) necessary. We have other words now that operate within alternate conceptual constellations. Those new words accord better with how the mind works (via embodied and distributed cognitive apparatuses) and how we now understand writing to proliferate, to circulate, to participate in our thinking. And those new terms give us other insights, allowing us to think other thoughts. If the Age of *Invention* is over after more than two millennia—and I have no authority to proclaim it, so I merely pose the *if*—then so be it.