Chapter 1

In short, we must begin to move from a text-based rhetoric, exemplified by our attachment to the printed page, to a rhetoric that can account for the dynamics of the interface.

NOTES

1. See, for example, the CCCC “Promotion and Tenure Guidelines for Work with Technology” at http://www.ncte.org/about/over/positions/level/coi/1076s8.htm.

2. I am not arguing here that we should be seeking official credit for projects like “Hypertext Is Dead,” merely making note of the degree to which our ability to understand such projects often depends on an institutional economy that renders certain forms of writing invisible.

3. For example, the band They Might Be Giants released a CD in 1991 (Apollo 18) that contained eighteen 15- to 30-second sound clips that would intersperse with the more traditional-length tracks on the disc when played with the shuffle function.

4. An expanded version of the Address was later published as Technology and Literacy in the Twenty-First Century: The Importance of Paying Attention.

5. In 2003, Vincent Leitch explained, in reference to New Criticism, that “this type of textual explication remains for many critics not only a viable norm, but, even for its processed enemies, a main method of classroom teaching and professional demonstration” (p. 10).

6. I am thinking here of Wikipedia and how certain pages on that site are changed repeatedly, particularly those pages where so-called objectivity is impossible. Although the site keeps track of changes to its pages, the “page itself” may change on a daily, if not an hourly, basis.

7. Contrast this with, for example, N. Katherine Hayles’ (2002) more recent Writing Machines, which is more typical in that it concerns itself explicitly and specifically with textual analysis.


9. See, for example, Kendrick (2001).

10. The essay is a chapter in the Into the Blogosphere collection.

2

ECOLOGY

A rhetoric of new media requires us to rethink our disciplinary habit of attending to textual objects; however, we do not need to invent this rhetoric wholesale. This chapter argues that the resources provided by the long history of rhetoric will prove sufficient in this regard. Specifically, I argue that we can turn to the rhetorical canons to construct a rhetoric that will allow us to both understand and produce interfaces. First, however, we must approach the canons from a different perspective; centuries of viewing the canons through the lens of print technology have limited their usefulness as a conceptual framework. The first section of this chapter identifies a couple of thinkers who have begun the work of reconceiving the canons that my own project attempts to continue. Although they have survived to the present day, the canons have lost much of their explanatory power in our discipline. The second section builds on contemporary rethinking of the canons, suggesting a new conceptual metaphor on which we might draw to assist in this revision.

The third section of this chapter turns to another of our inheritances from rhetorical history, the classical trivium of grammar, rhetoric, and logic. Much like the first two sections attempt to rethink the canons, I argue in this section that the trivium should be rethought as layered ecologies, that each element of the trivium describes not a separate discipline, but a dif-
spective on rhetorical practice. The test of an ecological perspective will come in part from our attempts to draw on it analytically, but, more important, from our ability to take it up as we read, write, design, mix, and produce new media.

THE RHETORICAL CANONS

Despite having persisted for millennia, the five canons of classical rhetoric (invention, arrangement, style, memory, and delivery) are more like a disciplinary heirloom than they are part of our core intellectual inheritance from antiquity. The canons are really a mixed bag, with what Kathleen Welch (1999) has called a “long and twisting history” (p. 81). On the one hand, invention and style remain central concerns for scholars in rhetoric and composition; on the other hand, despite occasional attempts to revive them, memory and delivery stand as nearly vestigial canons, little more than reminders of rhetoric in a different place and time. Arrangement falls somewhere in between, embodying the necessity of discursive forms, but occasionally lapsing into formulae like the notorious five-paragraph theme.

The canons have so completely diffused into our collective conceptions of rhetoric that they are almost beneath our notice, and yet most rhetoric and composition scholars would struggle to explain exactly what the canons are.

It is a curious neglect that the canons suffer from, however, because there is probably no better demonstration of the technological specificity of rhetoric than the canons’ imperfect translation from ancient Greece and Rome to the present day. We may recall each of the five canons, but we tend to take for granted the idea that memory and delivery faded in importance once rhetoric shifted from an art of oral presentation to scriptural, written, and printed texts. This narrative of the canons’ development is fundamentally inaccurate, as I hope to demonstrate here, but that inaccuracy is even more interesting when combined with our field’s unwillingness to pursue this narrative to its logical conclusion. If memory and delivery genuinely were “forgotten” canons, then this would serve as evidence of an irreducibly technological dimension to rhetoric, a dimension that to date remains a “mere” specialization in the discipline, rather than a concern that cuts across all of rhetorical scholarship. If rhetoric were, in our collective understanding of it, intrinsically technological,3 then we might begin to address some of the crucial cultural issues4 (e.g., access, intellectual property) that have heretofore been identified as “specialist.”
With not only the facts of this story wrong, but its implications all but ignored, it is worth considering just why this perception of the canons exists and even thrives. In part, it is because the canons are beneath our notice that this version has gone uncontested. The canons are simply the canons. Unlike the three modes of rhetoric (forensic, deliberative, epideictic) or the three proofs (ethos, logos, pathos), taxonomies that also are part of our rhetorical inheritance, the canons lack a certain wholeness, a sense that they exhaust the given possibilities for the phenomenon they describe. Although it goes largely unremarked, that phenomenon is probably the writing process, itself an important conceptual framework for contemporary rhetoric and composition scholars. The canons map loosely across the writing process or more accurately the speaking process. It is not difficult to imagine the canons being taught to ancient rhetors as the stages one must undertake to produce an oration. One must come up with ideas, put them in a particular order, figure out how to express them, memorize the text that results, and finally deliver it. Because the latter two steps are not relevant to the composition of written text, it follows that the corresponding canons have become obsolete.

However, because it is a loose parallel at best, and one that is not really rendered explicitly in our scholarship, the canons suffer the further indignity of being used as a model for a particularly artificial and linear version of the speaking/writing process, one that corresponds neither to ancient nor to contemporary production of discourse. We do not speak of the recursive nature of the canons or of how the canons are unique to each individual speaker or writer. Scholars are not writing chapters and articles about the benefits of postcanonical theories. The canons are not expressive, cognitive, or epistemological; they are simply “the canons.” They represent stages or steps in a diluted process for the production of discourse. Although on occasion one or another of them has served to focus our scholarship (e.g., the revival of invention), this is normally accomplished by removing one canon and ignoring the other four. Whatever vitality they may have held for ancient rhetors and rhetoricians has not accompanied the canons to the present day.

In an effort to reclaim some of that vitality, it is worth taking a closer look at what I described earlier as the narrative of the canons' development, and specifically at the canons of memory and delivery. These canons are examined in more detail in later chapters (Chaps. 6 and 7, respectively), but those chapters assume a relevance on the part of memory and delivery that we can establish initially here, an importance that corresponds to Kathleen Welch's (1999) discussion of them in Electric Rhetoric. My argument is not that it is only with the emergence of new media that memory and delivery assume a revitalized role. Rather, like Welch, I would contend that these vestigial canons are no less important in print-based rhetorics than they were in oral cultures or will be in digital ones. Our practice of reading the canons through the lens of the writing process has left us unaware of their importance, a misreading that should be corrected.

If there is one canon that would seem to be the least useful for a rhetorical grounded in the printed page, it would be memory. Memory was held by Plato to be one of the chief casualties of a turn to the written word. “If men learn [writing],” he wrote, “it will implant forgetfulness in their souls; they will cease to exercise memory because they rely on that which is written, calling things to remembrance no longer from within themselves, by means of external marks” (Phaedrus). Ironically enough, some 2,500 years later, Sven Birkerts (1995) makes a similar argument, only this time against the emergence of digital writing. In a section predicting the “flattening of historical perspective,” Birkerts writes,

As the circuit supplants the printed page, and as more and more of our communications involve us in network processes—which of their nature plant us in a perpetual present—our perception of history will inevitably alter. Changes in information storage and access are bound to impinge on our historical memory. The depth of field that is our sense of the past is not only a linguistic construct, but is in some essential way represented by the book and the physical accumulation of books in library spaces. In the contemplation of the single volume, or mass of volumes, we form a picture of time past as a growing deposit of sediment; we capture a sense of its depth and dimensionality. (p. 129)

In other words, we will cease to exercise history because we will rely on that which is stored in databases, at least according to Birkerts. There is a sense in which Birkerts' argument might be used to refute Plato's. After all, if Plato's predictions about the demise of memory had proved accurate, Birkerts would not be able to offer his. But both of these arguments are highly generalized. Memory is painted as the victim of technological change in each case, without much thought offered as to how it is being represented or how memory is actually practiced.

Although it is perhaps too early to confirm or deny the various predictions that Birkerts makes, Plato's are little more than a historical curiosity for us. It may be true that our contemporary powers of memory are individually weaker than our ancestors', but it is almost certainly the case that our collective memory is stronger by virtue of our ability to store informa-
tion with the printed word, audio and video recording, and as bits on our computers. However, the question of more or less—or better or worse—memory is besides the point. Claims of whether or not forgetfulness has been “implanted in [our] souls” or whether our culture’s sense of history will languish in a digital age do not speak to the role that memory plays (or no longer plays) in the production of discourse.

For a concrete example of what I mean here, I turn to a study that Christina Haas (1996) conducted and reports in Writing Technology: Studies on the Materiality of Literacy. In the second section of that book, Haas reports on two studies designed to elicit information about the cognitive effect that word processing has on writers. One result of these studies is her attempt to articulate one of the crucial differences between pen-and-paper composing and word processing:

Clearly, writers interact constantly, closely, and in complex ways with their own written texts. Through these interactions, they develop some understanding—some representation—of the text they have created or are creating. This chapter argues that one of the things that writers come to during the course of text production is an understanding of the meaning and structure of their own written arguments; I call this understanding or representation of one’s own text a sense of the text.

(p. 117)

Although Haas focuses, both in this description and in the discussions that follow, on the representation implied by text sense, it is clear throughout that she is discussing memory. In fact, she links them a few pages later, explaining that, “As the text gets longer and more ideas are introduced and developed, it becomes more difficult to hold an adequate representation in memory of that text, which is out of sight” (p. 121, italics added).

Haas’ (1996) studies indicate both that writers do not plan as much with word processing (because what they write can be changed easily) and that their sense of text is affected by the limited amount of text their screens can display (leading many writers to print out drafts). A writer’s sense of text, she writes, involves “a representation of the text as a spatial and physical object” (p. 119). When she asked the participants in her study to perform a “recall task,” this conclusion was borne out because the writers were able to remember significantly more of their work composed with pen and paper than they were when composing similar work with a word processor. In short, Haas’ conclusions bear out the fact that memory is not a “dead” canon with the turn toward writing. Rather, she demonstrates that writing calls on us to practice that canon in different ways.

We practice delivery differently with written tasks as well, although it too is often taken to be irrelevant or unnecessary in a print environment. Although Plato refers directly to memory in his indictment of writing, we also might observe on his part a concern with delivery. He attributes to writing “a strange quality” much like painting

...for the creatures of painting stand like living beings, but if one asks them a question, they preserve a solemn silence. And so it is with written words; you might think they spoke as if they had intelligence, but if you question them, wishing to know about their sayings, they always say one and the same thing. And every word, when once it is written, is bandied about, alike among those who understand and those who have no interest in it, ...

Plato contrasts the written word to the “living and breathing word” embodied in his dialogues. Although he would have his readers believe that this contrast is an essential one, it is more accurate to describe it as a difference between oral and written deliveries.

In Plato’s estimation, of course, the delivery of a written text is more accurately perceived as a text devoid of the various qualities of oral delivery; indeed, that is how we have tended to view the fifth canon in the discipline. With few exceptions, we have considered it through the decontextualizing lens of the writing classroom, where “turning in papers” is a near-universal and transparent activity. This transparency parallels Plato’s account of writing as well: Written words are encountered, at least in this brief account, in a vacuum, divorced from any context, much less the rich one surrounding the event of spoken discourse.

Certainly, Plato could not have foreseen the technological developments of the following millennia, but that is a poor excuse for our own neglect of the contexts in which we produce and consume writing. One example of an attempt to redress this neglect is John Trimbur’s (2000) “Composition and the Circulation of Writing.” In that article, Trimbur argues that our focus on the student–paper–teacher transaction “isolates an education in writing from the means of production and delivery”.

To anticipate the main line of thought, I argue that neglecting delivery has led writing teachers to equate the activity of composing with writing itself and to miss altogether the complex delivery systems through which writing circulates... delivery has been an afterthought at best, assigned mainly to technical and professional communication and associated largely with such matters of document design as page lay-
out, typography, visual display of information, and Web design. (pp. 189–190)

It is not unusual, in fact, to see claims that recent developments in information technology, and the Web in particular, have resuscitated the question of delivery. Although there is merit to these claims, they leave the neglect that Trimbur speaks of unchallenged. Indeed, we may think more about delivery when we compose for more visually rich media, but that does not mean that this canon is irrelevant to print.

Among other things, Trimbur (2000) demonstrates the continued relevance of delivery by looking at periodicals like the Wall Street Journal and the National Enquirer. He begins with the “different routes” that the two periodicals take and suggests that, from a classical economic perspective, there is little difference between the two. From a Marxist perspective, however, one that attends to circulation (a term Trimbur uses interchangeably in the essay with delivery), there are marked differences between the two:

To put it another way, the distribution of the Wall Street Journal and the distribution of the National Enquirer no longer figure simply as equivalent moments in the circulation of commodities, guided by the law of supply and demand. Instead, what gets distributed by these quite different types of reading matter is the productive means to name the world, to give it shape and coherent meaning. (p. 209)

As this analysis suggests, Trimbur (2000) is not merely concerned with delivery as a procedural or practical matter; his interests in this forgotten canon are decidedly political, ethical, and economic. In this way, he conflates what, later in this chapter, I describe as ecologies of practice and ecologies of culture, but this conflation functions as a counterstatement (in the Burkean sense) to what Trimbur describes earlier in the essay as the “foreshortening of delivery system” in composition studies in general (and the Elbow/Bartholomae debate of the mid-1990s specifically). In its focus on the student paper as the writing act par excellence, our discipline has “link[ed] production directly to consumption within the intimate space of the classroom/home” (p. 194), a connection that leads to the neglect that Trimbur considers.

There are many other equally compelling instances we might draw on to demonstrate the relevance of both memory and delivery to writing, but the work of Haas and Trimbur here should be sufficient at the least to suggest that our discipline’s narrative about the development of the canons in general—and of those canons in particular—is a flawed one. It is accurate to note, as Plato did, that wholesale changes in discursive technologies are going to transform the practices surrounding the discourses we produce, but we have been too content to define those practices narrowly, such that we have treated memory and delivery as if they are no longer relevant. In other words, we appear willing to acknowledge that rhetorical practice changes as our technologies do, and yet we have maintained an oddly binary vision of that change. As Haas (1996) demonstrates, we are no less beholden to memory for the fact that we may no longer memorize speeches. In tying delivery to relevant, material practices of circulation, Trimbur suggests that we ignore that canon to our peril as writing instructors. Taken together, they suggest that the canons are not simply on/off switches. Rather, as Welch (1999) puts it, they “have recurred in different forms and with different emphases in varying historical eras.” (p. 144)

REFRAMING THE CANONS AS ECOLoGY

Welch’s insight has been slow to enter into the common sense of the discipline, however, and it is worth our time to pause for a moment and consider the reason for this. After all, the canons have not exactly faded into obscurity. Kathleen Blake Yancey, in her Chair’s Address to the 2004 CCCC, called for a “new model of composing” grounded partly in the rhetorical canons, and yet this suggestion has had a limited impact on the discipline. One possible reason, of course, is that the juxtaposition of new technology with the canons of classical rhetoric may strike us as anachronistic. Yancey’s other expressions (deixis and circulation) resonate in obvious ways with contemporary information and communication technologies, whereas the canons do not. Much like Welch, however, Yancey is quick to point out that this lack of resonance is less a problem with the canons than it is with the way we have come to understand (or misunderstand) them.

This means that we need to take a temporary step back from the canons and examine the disciplinary context within which we have tried to understand them. If our field is to take up the calls of scholars like Welch and Yancey and to locate the canons more centrally in the discipline, we also must understand why they fell into disuse in the first place.

This understanding cannot happen as long as we continue to view them, as explained in the last section, as a somewhat inaccurate map of the writing process. Although there are undoubtedly overlaps between the
two, I hope to demonstrate throughout this book that the canons provide a much broader scope, particularly for our inquiry into new media, than can process theory. This expanded scope requires a different approach to the canons than we have taken as a discipline thus far. We have not denied the existence of the canons. Rather, we simply have not had much use for them, and so the fact that they have changed over time has had minor significance at best. This is particularly so when compared with those frameworks drawn from classical rhetoric that tend more toward the theoretical or universal. 8 It is relatively simple, for example, to use Aristotle’s pisteis as a heuristic for reading contemporary texts and to analyze the interactions among ethos, logos, and pathos. This is a common enough classroom exercise even today. But the canons are a set of practices that result in the texts thusly analyzed, and, as such, they remain largely invisible. Even those, like arrangement and style, that are visible only provide a final snapshot of the practices behind a given text. For a discipline like ours that depends heavily on textual analysis, frameworks that fail to lend themselves to that activity are simply not going to be especially valuable.

This is a point worth making as directly as possible. I would contend that much of our neglect of the canons to date is the result of an impoverished vocabulary on the part of our discipline. That is, the canons have failed to rest comfortably inside either of the mirror-image fetishes of “theory” and “practice”—the binary around which our field persists in defining itself. 9 As a result, we have paid minimal attention to them as the field has grown. Despite the looseness with which theory and practice are defined and deployed, it would be difficult at best to place them squarely within one camp or the other. Each of the canons names a class of practices, it is true, but each of the canons, not to mention when we take them as a coherent set of such classes, ends up being more abstract than what we typically signify by the term practice. For example, to argue that we should be teaching invention in our classrooms is to make a much different claim than to argue that we should be teaching freewriting or mind-mapping. To argue, as Yancey does, that the canons should be a centerpiece of a new model of composing is a third type of claim.

For all that we seem to be moving up the ladder of abstraction, from practice to canon to canons, it would be difficult to make a convincing case that there is something at the top of the ladder that we might call “canon theory.” Following Stephen Knapp and Walter Benn Michaels, Thomas Kent (1997) offers the following thumbnail sketch of what “theory” means disciplinarily:

By “theory” I mean a special project in composition studies: the attempt to govern the writing act by appealing to an account of the writing act in general. Stated a bit differently, the project of theory attempts to construct a generalized account of writing practice that remains uncontaminated by practice itself...theory provides a formalized structure of understanding to which we may appeal in order to justify and validate our advice to students, our place at the academic trough, and our mission as teachers. (p. 149)

Insofar as the canons appeal to an account of the writing act in general, it is only to observe that the five classes of practices are present in any discursive act. Although this observation runs counter to the narrative discussed in the last section, it seems mild compared with the controversies engendered at one time by competing theories of process or by the various accounts of interpretation generated in the wake of New Criticism and structuralism. In other words, in contrast to the hermeneutic or pedagogical implications for much of what counts as theory in our field, the canons represent a much more innocuous, ontological claim. We may neglect one or more of the canons, and some critical mileage may come of recalling our attention to it/them, but in the final analysis, there is no competing account against which the canons are tested in our scholarship and research because the canons are not theoretical per se.

How then might we frame the canons in our field? How can we understand them in a way that both explains their persistence (despite a long history of neglect) and allows them to occupy the central role that Yancey advocates for them? As I explain in the opening pages of this chapter, the term ecology provides an answer to these questions. I close this chapter with an illustration of how an ecological vision of the canons might assist us in looking at new media. For the remainder of this section, however, I want to call attention to some of the history of this term as it has been (infrequently) adopted in the discipline and to make brief note of how my adaptation differs from others.

The practice of drawing on ecology, a term typically associated with the study of the natural environment, as a metaphor for human activity dates at least back to Gregory Bateson’s (2000) Steps to an Ecology of Mind. Bateson argues for what we might now call distributed cognition, an epistemology that locates mind not simply within individuals, but socially as well. Bateson writes in “Form, Substance, and Difference” that “The individual mind is immanent but not only in the body. It is immanent also in pathways and messages outside the body; and there is a larger Mind of which the individual mind is only a sub-system.” It is not difficult to see parallels between
Bateson's theory of mind and a certain stage in the development of process theory in composition. In fact, although she does not cite Bateson, Marilyn Cooper's (1986) *College English* article, "The Ecology of Writing," is the first to elaborate a connection between ecology and writing.

Cooper (1986) addresses the "growing awareness that language and texts are not simply the mean by which individuals discover and communicate information, but are essentially social activities" (p. 366), a perspective that contemporary writing scholars all but take for granted. Cooper's attempt to seize on this awareness takes the form of a suggestion that we view writing ecologically:

In contrast, an ecology of writing encompasses much more than the individual writer and her immediate context. 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 the other writers and writings in the systems. An important characteristic of ecological systems is that they are inherently dynamic; though their structures are contents can be specified at a given moment, in real time they are constantly changing, limited only by parameters that are themselves subject to change over longer spans of time. In place of the static and limited categories of contextual models, the ecological model postulates dynamic interlocking systems which structure the social activity of writing. (p. 368)

I quote Cooper at length here because I share both her estimation of the value of an ecological model of writing and her delineation of its characteristics. Particularly of note is the constant motion of an ecological system. Although the turn to process in our field has acknowledged the importance of change and motion leading up to the production of discourse, too often that motion is arrested in the emphasis on static textual objects that I discuss in chapter 1. As we turn to the production of interfaces, of digital writing, we require a model capable of taking account of not simply the process leading up to a release, but the activity that follows as well.

If Cooper was the first to detail the connection between ecology and writing, perhaps the most thorough elaboration of that insight has come from Margaret Syverson (1999) in her book *The Wealth of Reality: An Ecology of Composition*. Syverson begins her book by making explicit the terms of Cooper's essay; the adoption of an ecological model for writing is a shift in the "unit of analysis." Syverson explains that, although "writers, readers, and texts form just such a complex system of self-organizing, adaptive, and dynamic interactions," they are also "situated in an ecology, a larger system that includes environmental structures . . . as well as other complex systems operating at various levels of scale" (p. 5). Syverson details what she sees as four attributes of ecological systems: distribution, emergence, embodiment, and enaction. Distribution refers to the way that processes of all sorts (including cognitive processes) are "both divided and shared among agents and structures in the environment" (p. 7). Emergence describes the way that complex systems, made up of simple components, rules, and/or structures, tend toward self-organization and increased complexity. Embodiment is characteristic not just of writers and readers, but of texts themselves, inscription technologies, and the environments where our interactions with language take place. Finally, "Enaction is the principle that knowledge is the result of an ongoing interpretation that emerges through activities and experiences situated in specific environments" (p. 13). In many ways, enaction is the *sine qua non* of complex systems; even as it represents an attribute of such systems, it also is the fundamental condition of possibility for them. Syverson cites Lucy Suchman, who asserts that "The situated nature of learning, remembering, and understanding is a central fact" (cited on p. 13). According to Syverson, these attributes manifest themselves across five dimensions: physical-material, social, psychological, spatial, and temporal. Although each is introduced separately, Syverson is careful to note that "they are five aspects of every object, process, fact, idea, concept, activity, structure, event, and so on" (p. 22). That is to say, these dimensions can be conceptually distinguished from one another, but they are not distinct in practice. Furthermore, these dimensions, as well as the attributes that manifest in them, "can be observed at every level of scale . . . in composition studies, from a poet's tiny editorial correction on a draft of a poem to a global literary movement—poststructuralism, feminism, hermeneutics" (p. 23).

This book's ecological approach is less elaborate than Syverson's, deploying it in a somewhat different fashion. Before I move on to that explanation, however, it is important to acknowledge the breadth of the term because rhetoric and composition scholars are not the only writers in the humanities drawing on ecology as an explanatory tool. Media ecology, for example, is a term that has figured in the work of Neil Postman (1970) since the early 1970s, when he wrote that, "Media ecology is the study of media as environments." In her book *Writing Machines*, N. Katherine Hayles (2002) elaborates on this notion (although she uses the term *medial ecology*), explaining that "The phrase suggests that the relationships between different media are as diverse and complex as those between different organisms coexisting within the same ecosystem, including mimicry, deception, cooperation, competition, parasitism, and hyperparasitism" (p.
first chapter and online surveillance in the fourth. He articulates his approach this way: "Taking such work to exist in an expanded, ‘ecological’ sense demands an effort at making a nonreductive network of interpretation, with the unfortunate possible result of a certain arduousness" (p. 11). The descriptions that ensue in Fuller’s book are far from arduous, but the scope of his interpretation ranges beyond my own, which is focused more specifically on the rhetoric of new media. Although Fuller’s work avoids it, there is a danger of erring on the side of expansiveness, of allowing ecology to stand as a backdrop, as a synonym for “everything that happens.” This project attempts to hold to Fuller’s insistence on nonreductive accounts at the same time that it articulates a framework not unlike Syverson’s. But where Syverson’s axes attempt to encompass an ecology of writing, my own is less certain.

At the beginning of Datacloud: Toward a New Theory of Online Work, Johndn Johnson-Elola (2005) defines the phenomenon from which he draws his title as “a shifting and only slightly contingently structured information space” (p. 4). It is this notion of slight structure, a structure contingent on the shifting dynamics of the various interfaces that allow us to negotiate the datacloud, that this project takes as its goal. That cloud of information is shot through with technologies, media, and interfaces. Where Fuller seeks to trace out the various connections at a cultural level, as I argue in the next section, this project works at the scale of ecologies of practice, focusing instead on the strategies and tactics that we bring to bear on new media at the same time that our technologies constrain and empower us. The canons serve this project less as an exhaustive set of terms than they do as analytic and productive starting points from which we might begin a sustained engagement with discursive technologies. As a means of locating the canons conceptually, the next section offers a second set of revised terms from classical rhetoric. My hope is that they help place this project somewhere in between the undifferentiated “backdrop” model of ecology and other, more heavily articulated models.

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**CLASSICAL RHETORIC 2.0**

Cooper (1986) cautions in her article that ecological is not "simply the newest way to say ‘contextual’" (p. 367), and any attempt to deploy an ecological framework (as opposed to simply offering ecology as a backdrop for one’s activities) must bear this in mind. Contextual models, as Cooper
Chapter 2

our contemporary context and to classical rhetoric than would be a literal reading and implementation of the ideas of Plato, Aristotle, and/or Cicero. This argument is not in favor of willful misreading, however. Instead, it is a suggestion that we conceive of classical rhetoric less as a set of static absolutes and more as a collection of situated responses to the kind of generalized cultural imperatives that Bender and Wellbery discuss. This does not require us to abandon classical rhetoric. On the contrary, as Susan Jarrett (2002) remarks in one of the few substantial treatments of Bender and Wellbery's article, "Changing practices in the future are underwritten by changed visions of the past" (p. 66). Rhetoricality encourages us to see the inheritance of classical rhetoric as one possibility alongside others.

I raise the issue of rhetoricality at this point because it provides one alternative for avoiding the dangers against which Cooper warns. I take it as an advantage to work here with classical terminology at the same time as I suggest that we consider them in light of contemporary technology. This is one place where our discipline's casual understanding of the canons is beneficial: That individual canons have changed over time is not a controversial claim, and so the canons' historical mutability provides a corrective to the risk of taking them as static categories. Chapters 3 through 7 of this book suggest fresh ways of thinking about the canons, going so far as to rename them for the context of new media, but these revisions or transformations are not intended to replace the canons' classical formation. Rather, they are offered as new layers or dimensions, speculative amendments to terminology that has a long, albeit checkered, history. Translated into Bender and Wellbery's parlance, my presentation of the canons in this book might be described as an example of the kind of work made possible by the idea of rhetoricality.

What does it mean, then, to view the canons as an ecological model? This book offers three answers to this question, two of which I develop briefly in the remainder of this section of the chapter and which lay the groundwork for the third, longer answer: the next five chapters, each of which examines one of the canons in light of new media. Viewing the canons ecologically, it seems to me, requires that we attend to two related questions: First, how does this perspective affect our understanding of the canons themselves, that is, how does it address the neglect discussed in the first section of this chapter? The second question takes a step back and asks how an ecological model of the canons then fits into the broader field of rhetoric and composition. How does a revised model of the canons fit (or complicate) what we might describe as our disciplinary ecology?

The canons have functioned neither as theory nor practice and, thus, as I suggested in the last section of this chapter, they have not fit too com-
fortably into the field of rhetoric and composition. When we have paid particular attention to one or more canons, it has often been to render it more static. Consider, for example, the various strategies advanced under the umbrella of invention, like freewriting, outlining, mapping, tagmics, and so on. Although part of viewing invention ecologically must include this repertoire of pedagogical strategies, the emphasis on conscious, visible activity is necessarily a reduction of the canon. An ecological model of invention would treat it at the level of generalized activity. I find it useful to think of the canons as relations rather than categories, and I mean by this something similar to what Kenneth Burke (1969b) does with the ratios among the terms of his pentad. For instance, the canon of invention frames the relationship between given and new information, arranging the relationship between discourse and space, memory the relationship between discourse and time, and so on. These relations are the site of focus for a particular canon, but they are not exclusive or intrinsic to any single one, as I discuss in the final section of this chapter.

The ecology of invention is, of course, composed of far more than a series of directed activities, and two examples from my own experience may clarify what I mean by this. I attend a couple of conferences per year, and each time, starting about halfway through the conference and extending to as long as a week following my return trip home, I am a particularly productive writer. I suspect that many people share this experience. In part, we are trained in the humanities to respond to texts, and usually this is done at the speed of reading. At a professional conference, however, where we are taking in many texts over a short period of time, it makes sense that we would generate potentially productive connections and associations more rapidly. The second example I would offer is my experience with keeping a weblog. When I began blogging, I noticed a shift in my perceptions of the world around me. Much like the t-shirt that promises/threatens “I’m blogging this,” a much larger portion of my daily life became available to me as subjects for writing. Over time, the subtle obligation of the weblog has sometimes encouraged me to write when otherwise I would not. In each case, my own particular invention ecology has shifted, although there are professional duties lurking in the background of each activity, those duties do not directly “cause” my writing.

What I am describing as my invention ecology is a personal sensitivity to the conditions under which invention takes place in my own writing. It is not unlike what Karen Burke LeFevere (1987) describes as the “ecology of invention—the way ideas arise and are nurtured or hindered by social context and cultures” (p. 126), although my examples here are less oriented to the shared, visible ecology that LeFevere proposes we study. The impulse behind our projects is a similar one, however. Although we may translate the obligations and imperatives of invention into our own experience—in fact, we cannot help but do this—we are nonetheless drawing on a shared ecology of invention of the sort that LeFevere gestures toward.

That ecology encompasses more than the individual or social development of ideas, however, and requires us to range beyond traditional notions of invention as a stage in the production of discourse. For example, we might consider the feature at Amazon.com that offers book recommendations based on the purchase patterns of other customers: “People who bought this book also bought . . .” (Fig. 2.1). Although their motives for providing this information are primarily economic, this site feature is both social in that it aggregates individual purchases and personal in that it explicitly marks the relation between the given of an individual purchase and the new of other volumes tracked by their databases. It also is notable because this feature on Amazon is an instance of invention that is built into the interface, without the (necessarily) conscious participation of the consumers providing the data. As I argue in the next chapter, new media are a site of invention in ways that traditional discursive objects are not.

For the moment, however, it is enough to observe that an ecological approach to the canons treats each as an almost virtual repertoire of practices. The canon of invention does indeed include the various, conscious pedagogical strategies that have circulated in our field, but as any practicing writer understands, invention is not a practice that can be reduced to a handful of activities. Each of us draws our own set of practices from that larger repertoire, which includes other writers, particular sites and materials, texts, the various cultures we negotiate, and so forth. If we recall Johnson-Ells’s (2005) definition of datacloud, “a shifting and only slightly structured information space” (p. 4), the canons provide us with one means of structuring that space, of differentiating our activity within it.

There is a second axis along which I want to differentiate the information space suggested here, an axis that provides another, tentative answer to the questions raised at the beginning of this section. If each of the canons is an ecology of various practices, sites, and activities, what then might we make of the canons as a system? One potential drawback of the ecological approach is the danger that it will become too expansive, becoming simply a backdrop or synonymous with “everything that happens.” On the contrary, I would suggest that the canons represent an ecology of practice, one scale at which we might examine new media (or media in general) and which is embedded in an even more generalized ecology. I have found it particularly useful to differentiate three scales in particular within this broader ecology and to use the classical notion of the trivium
(grammar, rhetoric, and dialectic/logic) to do so. I want to close this section of the chapter by laying out a more contemporary version of the trivium, which I label ecologies of code, practice, and culture. I also discuss some of the precursors I have drawn on for this model, and I consider a couple of its more relevant implications for this project.

For nearly 2,000 years in Europe, from ancient Greece up until the Middle Ages, the trivium designated the course of study leading to a bachelor of arts degree (with the quadrivium of music, arithmetic, geometry, and astronomy the curriculum for a master of arts). The trivium occupies the same kind of limbo reserved in our field for the canons. On the one hand, the study of rhetoric is grounded in this tradition; on the other hand, it does not hold much relevance for curricula today. Perhaps the most enduring legacy of the trivium is comprised of the disciplinary distinctions among linguistics, speech, rhetoric, philosophy, and literature. But as these disciplinary distinctions have been instantiated into departmental and institutional forms, any organizing or structuring force that the trivium might have at one time possessed has by now faded. Yet the three categories of the trivium are qualities of discourse, not of disciplines or departments.

I want to suggest that, particularly in the case of new media, there is some value to be found in the trivium, specifically if we think of each of the three as different scales or units of analysis. Some of the worst arguments about new media (and about technology in general) suffer primarily from an unwillingness to consider the possibility that what is true at one scale of activity may not translate up or down to another. To put it more positively, the trivium is valuable because it may help us understand that the most important changes wrought with and by new media are changes in our ecologies of practice. This is not to deny that technologies make changes at other scales, but it is to suggest that the transition from one scale to the next is not necessarily seamless, an assumption I have labeled elsewhere the “futility of scale.” One canonical example of this comes from Kenneth Burke’s (1969a) Rhetoric of Motives, where he discusses the shepherd who treats sheep well as a means of increasing their value for market. The shepherd’s practice of caring for sheep may be no different from that of a child who keeps a lamb as a pet, but the cultural logics behind these practices are certainly different.

If one of the advantages of the trivium is its ability to distinguish conceptually among different scales, one of its disadvantages is the unevenness of the three categories themselves, and this is part of what we will try to amend by updating it. That unevenness is revealed through something as simple as the usage of the terms themselves, for while grammar and logic are both represented as possessing a negative threshold (a statement can be
There is no statement that is “arhetorical” or “unrhetorical.” Although this has at times been considered a weakness of rhetoric, I would contend that, in fact, the absence of an analogous threshold for rhetoric is one of the features that makes it amenable to an ecological approach, one that I would like to extend to the other two realms as well. This is part of the reasoning behind my practice of renaming them for our purposes here. The rules by which we might decide that a particular utterance is ungrammatical are part of the ecology we understand as grammar; statements that would be deemed illogical by the rules of formal logic may seem eminently reasonable to the person making them if that person is drawing on a different set of cultural resources. However, rather than trying to undo millennia of usage and encouraging the kind of “free play” misreading that has plagued deconstruction (among other critical projects), it will be more fruitful to consider the ecologies of code, practice, and culture as the background of this project.

I discuss each of these ecologies momentarily, but it is worth being explicit about the relationships between code and grammar, on the one hand and logic and culture, on the other. Much like the shift I outline in my explanation of the canons, what I have in mind with respect to the trivium is a fairly subtle shift in orientation. Rather than imagining grammar, for instance, as a set of components and rules for the production of linguistic discourse, I suggest that an ecology of code is comprised not only of grammar, but also of different resources for the production of interfaces more broadly construed, including visual, aural, spatial, and textual elements, as well as programming codes. To speak of an ecology of code makes it no more nor less appropriate to write with sentence fragments. Rather, it is an attempt to acknowledge a broader range of resources on which we draw in the production of interfaces. A second point worth mentioning is that viewing the trivium ecologically entails seeing each area as structured (in the sense that Anthony Giddens [1983] defines the term). That is, shifting our focus from grammar, rhetoric, and logic (as subjects to be mastered by a student) to code, practice, and culture (as ecologies that we both contribute to and are surrounded by) implies that we both construct and are constrained by these terms. At each scale of activity, we acquire the proverbial hammers that extend our capabilities, but also predispose us to perceive nails.

As I explained earlier, the ecology of code is my designation for the varied communicative and expressive resources we draw on when we produce discourse, regardless of medium. In other words, both the rules and objects of grammar are located within this ecology, but language is one among many media whose elements participate in it. Gunther Kress and Theo Von Leeuwen’s (1995) Reading Images: The Grammar of Visual Design is one example of scholarship that contributes to this ecology, as do other practices that break them down into irreducible components. As I discuss next, this irreducibility is less substantial than it is operative, and so different writers’ theories of code will differ. The most important thing to note at this point is the expansiveness of the term code as I use it here. We are accustomed to thinking of code more exclusively as the set of different languages and commands for computers, and the ecology of code extends this usage to discursive production in general.

Much of my definition of the ecology of practice is implicit in my redefinition of the canons, but a couple of points are worth repeating. Practice implies conscious, directed activity, the explicit combination of elements from the ecology of code to produce a particular discursive effect. As with the ecology of code, I am working with a fairly expansive definition of practice, however. For example, one’s choice of medium (or media) and the audience for the practice also includes the audience for the ecology of practice. Ecologically, practice includes all of the “available means” and our decisions regarding which of them to pursue. In the case of interfaces, this ecology also includes not only those practices involved in the production of a particular interface, but those made possible by it. The ability to select books based on the relevance of aggregated user data, for instance, is part of the ecology of practice at Amazon (and many other sites). But it is also important to acknowledge those practices that may be unintended—user may take up and repurpose interfaces, expanding their ecology of practice beyond a designer’s intentions. In other words, I envision this ecology as largely descriptive even as it contains intentions and motives behind the practices gathered within it.

Of these three designations, the ecologies of culture are perhaps most appropriately thought of as the plural because it is this category that operates at the broadest range of scales, from interpersonal relationships and local discourse communities to regional, national, and even global cultures. Any act of discourse is going to be constrained in various ways by cultural assumptions; similarly, such acts intervene simultaneously at several levels. It would be no exaggeration to suggest that, from the perspective of ecologies of culture, discourse is necessarily multiple. A site like Amazon, even as it has pioneered several customer-oriented practices that can only success insofar as it successfully competes in the marketplace. Every interface strikes a similar balance among various constituencies, competing ideologies, and multiple contexts. Although they are less the focus of this book than are ecologies of practice,
ecologies of culture provide a corrective to what could be perceived as a more formalist orientation in ecologies of code and practice.

I close this section with a more detailed consideration of how these ecologies fit together. However, before I offer that explanation, it is worth briefly noting some of the precursors for my own updated trivium in the work of other rhetoricians. For example, the attentive reader may note some of the similarities between my treatment of the trivium and that of Kenneth Burke (1969), who, in his *Rhetoric of Motives*, articulates his own trivium of “positive, dialectical, and ultimate terms.” Positive terms, which would correspond to grammar, are for Burke, expressed in terms of a “physicalist” vocabulary, those terms that name the concrete objects of existence. Dialectical terms are those for which we have no “positive referent,” and in fact, Burke cites positivism as one such term. Rhetoric is for Burke the site of dialectical action, an order that “would leave the competing voices in a jangling relation with one another...” They are the terms over which we wrangle. The final category of terms for Burke are ultimate terms, which “place these competing voices themselves in a hierarchy, or sequence, or evaluative series.” Ultimate vocabularies are contrasted with dialectical terms insofar as they foreclose on the debates that characterize the latter. The parallels with my own trivium are apparent, particularly as concerns the relationship between the ecology of code and Burke’s positive terms, both of which name concrete, irreducible phenomena. Where Burke suggests the difference between dialectical and ultimate vocabularies, however, I see variations within ecologies of culture. Burke’s categories, particularly the latter two, are products of particular interpretations. That is, they describe patterns of usage rather than static categories; what stands as an ultimate term for one person may be entirely dialectical for another. Yet there is an exclusivity to Burke’s categories that, as I explain shortly, marks a significant difference between his terms and my own.

A second, more recent precursor can be found in David Kaufer and Brian Butler’s *Designing Interactive Worlds With Words* and their discussion there of what they call “representational composition.” Kaufer and Butler find in representational composition a middle ground located between two more conventional approaches to writing: structural composition and genre theory. Structural composition, they argue, has dominated writing instruction and focuses on the grammatical “principles of writing [that] could lawfully turn smaller structures into larger ones, words into clauses, clauses into sentences, and up the linguistic food chain” (p. 5). At the other end of their spectrum lie genres, “the cultural, historical, and sociological specifications that have led to the settling in time and place of one or another family of representations as an object of sufficient recurrence and

cultural visibility to be named” (p. 12). As a bridge from the former to the latter, they advocate training in representational composition, a sort of “pattern language” for writing, comprised of “basic element patterns” that can be adapted to a broad range of external circumstances and generic demands. Again, there are obvious parallels between their work and my own, not the least reason for which is that new media provides part of the exigence for Kaufer and Butler’s project. If Burke’s latter two terms collectively correspond to my notion of ecologies of culture, I would argue that ecologies of practice include Kaufer and Butler’s representational composition and genres as well. However, I am hesitant even to imply that this is a shortcoming given that their purpose is chiefly pedagogical.

A third set of parallels for my project is Clay Spinuzzi’s (2003) *Tracing Genres Through Organizations*. Unlike my own approach, Spinuzzi’s is largely inductive, drawing on fieldwork to arrive at a formal model informed by activity theory. Spinuzzi’s model has three parts, also described as scales or levels of scope: operations (which are unconscious and habitual), actions (which are conscious and goal-directed), and activities (which are unconscious and cultural-historical). The “three levels of scope complement each other” (p. 36), intertwining to form, along with other factors, what Spinuzzi ultimately describes as *genre ecologies*. Spinuzzi’s is perhaps the closest model to what I have in mind here, even as our approaches differ. One insight in particular from his book that is important for my purposes is the degree to which the different scales interpenetrate, resulting in operational rather than substantive distinctions among them. For example, he explains that operations are also called operationalized actions “since they begin as conscious goal-directed actions that are then made automatic” (p. 34). Think here of macros or templates for a word processor, which are pre-designed forms that free a user from having to format a conventional document from scratch. Actions also can become activities, as a conscious action made in a particular organizational context becomes part of that organization’s traditional or customary way of doing things even after the context no longer holds.

Although I share Spinuzzi’s willingness to treat these categories as flexible and context-dependent, there are a couple of important differences between his model and my own. Like Burke’s three-part scheme, Spinuzzi’s categories are exclusive. A particular phenomenon may move from one category to another over time, but at any given moment, it occupies only one—a fact reinforced by the use of micro-, meso-, and macroscopic to describe the different scales. This difference is not necessarily a crucial one, coming as it does from the different purposes behind our respective projects. But the labels for the different scopes raise a second difference,
one that is fairly important. Although I have described code, practice, and culture as operating at different scales, I hope to do so without necessarily assigning them a corresponding sizing. It is customary to think of the classical trivium in differently sized scales, but, if possible, this is a custom worth resisting. One way of describing the relationship among these three ecologies is to see practices as combining various elements of code to produce a statement or action, one of many such that then combine and tend to produce a particular culture. However, this notion is not entirely inaccurate, but such an account ignores the degree to which each of these three ecologies can be more or less present in even the most irreducible element. The use of the word terrorist (code) to describe someone (practice) carries heavily charged ideological implications (culture) at this point in our history, for instance. Or consider Nietzsche's (1998) infamous claim that "we are not getting rid of God because we still believe in grammar" from Twilight of the Idols.

In other words, I am offering this update of the classical trivium neither as categories nor as a progression so much as another "light structure" with which we might triangulate those analyses that the canons make possible. There are elements of code, practice, and culture in each of the interfaces that we might read or write with the canons, and those elements will add texture to our discussions as we consider the canons in more detail.

Although this project focuses specifically on ecologies of practice, distinguishing them from the ecologies of code and culture can only ever be a temporary, conceptual maneuver—one that does not translate into actual usage. In other words, there is no "pure" zone of practice distinguishable from either code or culture. Yet ecologies of practice also carry a certain limited amount of autonomy, shaped but not determined by ecologies of culture and capable of reframing ecologies of code in unforeseen ways.

**TRACKBACKS AS AN ECOLOGY OF PRACTICE**

Before turning to the individual chapters, and hence the individual canons, it is worth our time to clarify a couple of points about the framework I have developed in this chapter. Each of the canons can be described as an ecology, a complex system of people, sites, practices, and objects; taken together, the canons form what I am describing here as an ecology of practice, within which the canons operate. As such, the canons occupy a space that overlaps with ecologies of code and theory, but that is nonetheless distinct.

The chapters that follow treat each canon more or less independently of each other, but it is important to acknowledge that the distinctions among them are far less certain than the chapter structure of this book implies. Just as a single discursive event can be read productively across the ecologies of code, practice, and theory, it is not unusual to locate particular practices within more than one of the ecologies designated by the canons. I want to close this chapter with a brief demonstration of this claim, by examining the trackback link (Fig. 2.2).

Trackbacks are a feature of weblogs, although not all blogging platforms support this feature. Although we typically speak of a trackback in the singular, it normally involves multiple steps. The standard link on a webpage allows a user to move from one page to a second page, but that link is unidirectional unless the owner of the second page has linked back to the first. Trackbacks provide a protocol for establishing both links at the same time, functionally creating a bidirectional link between two weblog entries. These two entries supply part of the trackback's ecology of code, as does the HTML that enables the first writer to create a link to the second weblog. For the trackback to work, however, the second owner must first be published with a platform that allows trackbacks. Then that weblog owner must enable a CGI script, which will, once the first writer sends a "ping," rewrite the relevant page on the second weblog, adding a link to the first weblog (and usually the title and a brief excerpt of the entry being linked). From the perspective of the first writer, the process is much simpler than this. Each entry on a weblog has a unique trackback URL, and all that is required of the writer is that she copy and paste this URL into a window on her composing interface. Some weblog platforms even provide "auto-discovery," where the software will follow each of the links in an entry, determine whether any of the pages are trackbackable, and automatically ping them if they are.

From the perspective of ecologies of culture, trackbacks represent a step toward a more open, collaborative web, in no small part because trackbacks allow other people to make changes to a small portion of a weblog entry without the author's express permission. As anyone who has used trackbacks knows, however, this also leaves the weblog vulnerable to spammers, who have exploited trackback links in an effort to boost search engine rankings for their products. Trackbacks thus also participate in the arms race between spam marketing and the people trying to stop it.

Finally, they contribute to the perception that weblogs are a conversational space, rather than a purely informational space. They allow bloggers to directly invoke and address a particular audience in a much more immediate fashion than would be possible, say, with a search engine.
How might we consider the practice of trackbacking? Trackbacks can be read in terms of each of the canons; that is, they provide one example of a site where all five of the canons intersect and overlap. Although they are perhaps not typical in this regard, trackbacks provide an excellent illustration of the claim that the canons are not mutually exclusive categories, but complementary perspectives that allow us to focus on different dimensions of even a single practice.

**Invention**

In many ways, the motive behind trackbacks is an invention. Weblog entries frequently link to other sites, and such links are implicit endorsements of the sites to which they link. But a trackback link also places a link on the object site, and there is a certain obligation built into this practice. By placing a link to one’s own weblog on someone else’s site, the blogger is suggesting that the other person’s audience will find something relevant on her site as well. Often this will take the form of response, critique, or elaboration, but the basis of the trackback link is the idea that one’s own site will supply some new information in addition to the given of the other writer’s entry, whether it is new evidence, a different perspective, or a reinterpretation of material from the original.

**Arrangement**

By placing links to each other on pages at two different sites, the trackback also serves an arranging function. Anjo Anjewierden and Lilja Efimova (2005) pioneered a method whereby they use links (trackback and otherwise) to map out the relationships pertaining to specific social networks and to weblog conversations (Fig. 2.3), even going so far as to suggest how link patterns reveal different participants’ centrality or marginality in a particular network. Although it makes intuitive sense to say that there would be a denser pattern of linkage among the members of a social network, trackback links contribute to the process of making that linkage visible and measurable.

**Style**

Although trackbacks may not make an intrinsic contribution to the style of a given weblog entry (considering that their most significant change occurs
on someone else's page), they do alter the form of a weblog in slight ways. One of the factors distinguishing weblogs from online journals, as Will Richardson (2004) explains, is the author's willingness to engage with other blogs and sources. An online journal is often insular in style, recounting events and thoughts from a particular writer's life, whereas blogs engage each other, in part, through the practice of linking. The presence of trackbacks on a blog entry may not have an effect on the diction or word choice in that entry, but the broader form of the weblog is rendered more open to interaction and connection than it would be otherwise.

Memory

Much like their contribution to arrangement, trackbacks make the associations generated by a particular writer both visible and archival. Unlike a face-to-face conversation, where we might recall the general tenor of a conversation, or a particular position adopted by one of the participants, trackbacks archive the conversation, storing the connections as well as the participation. This is particularly significant considering how quickly individual entries are consigned to the archives by most blogging platforms. Weblog conversations can be recalled months after the fact, a process made much easier by the presence of trackbacks.

Delivery

Similarly, trackbacks aid in the process of circulation if we draw on the metaphor of the web as a place where we move from one site to the next. As frequently updated sites, weblogs do not encourage their owners to update the links within a particular entry once it is published. Enabling trackbacks allows a writer's audience to do the updating, making it easier for readers to follow a particular conversation and offer their own contributions in the form of trackbacks, even when a conversation has "finished."

In suggesting that each of the canons plays some role in our understanding of the trackback link, I have relied here on fairly traditional understandings of the canons, understandings that in some ways the subsequent chapters challenge or augment at the very least. I hope that this underscores my belief that the version of the canons offered here is not intended as authoritative or correct in any way. One of the central premises of this project is that the canons are mutable and dynamic, that they shift with changes in our discursive technologies as those technologies constrain
particular strategies and make others possible. It also is the case that different interfaces will combine and mingle the canons in various ways. In the case of the trackback, for example, it is fairly clear that spammers are interested almost exclusively in increasing the circulation (delivery) for their own sites, while I myself have used them to assist in the organization of a blogging "carnival," a distributed conversation about common topics occurring on multiple blogs, where my chief intention was to use them as a means of arrangement. The value of the canons, as an ecology of practice, lies in their ability to help us distinguish these various uses and to imagine yet others. To arrive at that point, however, we need to consider the canons in more depth and complexity than has been commonplace in our field, and it is to such a consideration that this project now shifts.

NOTES

1. See, for example, Jennifer Edbauer's (2005) "Unframing Models of Public Distribution: From Rhetorical Situation to Rhetorical Ecologies."

2. See, for example, J. Fred Reynolds' (1993) *Rhetorical Memory and Delivery*, or more recently, Kathleen Blake Yancey (2006), *Delivering College Composition: The Fifth Canon*.

3. I am not arguing here that rhetoric is primarily technology to the exclusion of its other intrinsic qualities, although I would contend that many in our field who are comfortable describing rhetoric as instrumentally social and cultural, for example, overlook its necessarily technological dimension.

4. Access is a particularly interesting case in point. With few exceptions (e.g., Banks, 2006), access is treated as a problem endemic to technology, meaning computers, as if access to public forums in ancient cultures (or to printing presses in early Modern Europe, or to means of distribution in contemporary societies) weren't similarly restricted. In 2005, on one of our disciplinary listservs, in response to an NPR story about musicians who were circumventing the highly restrictive and exploitative recording industry by composing music and distributing it online, several writers accused these artists of elitism simply because they were using computers to do this.

5. The Address was published in the December 2004 issue of *College Composition and Communication* as "Made Not Only in Words: Composition in a New Key."

6. I use the word tend here advisedly. In the example that follows, I would not describe Aristotle's *pisteis* as a "theory" per se, but because the proofs are near universal, they can be used to build theories, such as the notion that a truly "good" argument is one that uses a balance of the three types of proof, rather than, say, appealing exclusively through *pathos*. I disagree with this application of the *pisteis*, but my broader point is that the canons cannot be "applied" in this fashion.

7. To my mind, the pervasiveness of the theory/practice split in composition and rhetoric goes without citing. Nevertheless, Lisa Ede's *Situating Composition* is one of the most recent in a long history of texts that addresses it. See in particular her 15-year bibliographic "compilation of research on theory and practice in composition" on pp. 122-123.

8. Interestingly enough, a search on the trivium will reveal a range of resources for home schooling based in whole or in part on the classical trivium, sometimes mapped across similar frameworks from the Bible.

9. Although this discussion is perhaps not as clear-cut as I have presented it, the debate over Ebonics, for example, is in part a debate over the value of a negative threshold for grammar. Nevertheless, I would argue that this is still a widely held position, particularly outside of the academy.

10. This claim is more controversial, perhaps, for scholars outside of the discipline of rhetoric than it is for those of us inside. For a discussion of the "rhetoric of no rhetoric," see Valesio (1980).

11. As I explained previously, I take the shift from rhetoric to practice to be a much more modest shift than the other two.

12. There is overlap here between my own adoption of the term code and that of Katherine Hayles' (2005) latest book, *My Mother Was a Computer*. For Hayles, code encompasses the prior regimes of speech and writing, but she also situates code at the same conceptual level as the other two.

13. This is a reference to Christopher Alexander's (1977) *A Pattern Language*. 
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