Digital Rhetoric: Theory, Method, Practice

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// one // Defining and Locating Digital Rhetoric

Because the term “digital rhetoric” appears in a wide range of locations—scholarly articles; in the title of courses offered in departments of communication, English, and writing; academic and popular blogs; discussion lists such as H-DigiRhet; and theses and dissertations in many fields of study—my initial impulse was to resist defining the field of digital rhetoric and instead to follow Sullivan and Porter (1993) and focus on “locating” it with respect to current fields of study. As Sullivan and Porter argue, “defining a concept is a limiting activity; trying to establish a common meaning can have the effect of excluding enriching diversities” (391). This approach, although appropriate for an interdisciplinary field like digital rhetoric, presupposes an established community of researchers and practitioners: in Sullivan and Porter’s case, the field of professional writing has a significant body of research and the members of the field had engaged

in arguments about how (or whether) it should be defined. Digital rhetoric, in contrast, has not yet become established as a field. An additional consideration is that digital rhetoric draws its theory and methods first and foremost from the tradition of rhetoric itself—and this poses a dilemma because rhetoric is both an analytic method and a heuristic for production, and, critically for our purposes, can be structured as a kind of meta-discipline. The definition of rhetoric is taken up in more detail below, but Kenneth Burke's (1969) commentary on the scope of rhetorical practice is instructive:

> Wherever there is persuasion, there is rhetoric. And wherever there is "meaning," there is "persuasion." Food, eaten and digested, is not rhetorical. But in the meaning of food there is much rhetoric, the meaning being persuasive enough for the idea of food to be used, like the ideas of religion, as a rhetorical device for statesmen. (172–73)

If nearly all human acts of communication engage rhetorical practice (whether explicitly acknowledged or not), then rhetoric-as-method can be applied to all communication events. [1] [http://quod.lib.umich.edu/d/dh/13030181.0001.001/--digital-rhetoric-theory-method-practice?g=dculture;id=N1_1;note=ptr;rgn=div1;view=trgt;xc=1] While I do take a very broad view of the scope of rhetoric, I also believe that articulating a definition of the field provides a focus for future deliberation upon the acceptable methods (derived from the epistemological assumptions underlying such a definition) and practices that may constitute digital rhetoric as a field.

Unlike "rhetoric," a term that has been subject to extensive debate since well before Aristotle published his *Rhetoric* between 336 and 330 BCE, only a few scholars (notably Ian Bogost [2007] and Elizabeth Losh [2009]) have

undertaken the task of developing a comprehensive definition of digital rhetoric. The term "digital rhetoric" is perhaps most simply defined as the application of rhetorical theory (as analytic method or heuristic for production) to digital texts and performances. However, this approach is complicated by the question of what constitutes a digital text, and how one defines rhetoric. In the first part of this chapter, I will examine these core terms ("rhetoric," "digital," and "text") and provide an overview and critique of current approaches to defining digital rhetoric. In the second part, I return to the question of location as I examine the relationship between my construction of digital rhetoric and related fields such as digital literacy and new media and other emerging fields such as critical code studies and digital humanities.

Rhetoric

If you are reading a book on digital rhetoric, it is likely that you already have some sense of what rhetoric is and that it has established theories, methods, and practices—along with an extensive number of potential definitions (see Kinney, 2007, for 114 pages of definitions, arranged chronologically from Sappho, circa 600 BCE, to John Ramage, 2006). While it is well beyond the scope of this project to establish a definitive explanation of and definition of rhetoric, it is important to explain the tradition that I draw on and which informs the definition I will advance later in this chapter (and that serves as the starting point for the next chapter, on theories of digital rhetoric).

According to Bizzell and Herzberg (2000), "Rhetoric has a number of overlapping meanings: the practice of oratory; the study of the strategies of effective oratory; the use of language, written or spoken, to inform or persuade; the study of the persuasive effects of language; the study of the relation between language and knowledge; [and] the classification and use

of tropes and figures" (1). But, they argue, "Rhetoric is a complex discipline with a long history: It is less helpful to try to define it once and for all than to look at the many definitions it has accumulated over the years and to attempt to understand how each arose and how each still inhabits and shapes the field" (1). And indeed, it is necessary to review the history of rhetoric because our understanding of its use and value depend in part on recognizing and recovering rhetoric from those philosophers and theorists who have sought to minimize its power and/or purview. Contemporary approaches to rhetoric now go far beyond Aristotle's "art of persuasion" in terms of theoretical complexity, but at the same time general usage by the public tends to use the term to mean only style, or worse, as a pejorative applied to false or manipulative arguments.

I will provide more detail about classical and contemporary approaches to rhetorical theory in the next chapter, but the following brief historical overview should provide sufficient context for establishing the framework within which our definition of digital rhetoric will take shape.

Western Classical Rhetoric (Greek and Roman)

One of the earliest definitions of rhetoric is provided by Aristotle in his seminal treatise *On Rhetoric*: rhetoric is "the art (*techne*) of finding out the available means of persuasion" for a given argument (1991, 37). Aristotle goes on to describe how individuals might employ a theoretical framework to discover arguments that might be effective in public deliberation and judgment. Thus, as Richard Buchanan (1989) points out, "rhetoric is both the practice of persuasive communication and a formal art of studying such communication"; moreover, the power of rhetoric's call to persuasion is that it is formulated as an "art of shaping society, changing the course of individuals and communities, and setting patterns for new action" (93).

The practice of rhetoric was originally concerned with the methods one could use to construct a successful persuasive oration; these methods were simplified and codified by Aristotle in the late fourth century BCE. Classical rhetoric was concerned with only three main kinds of speech (and by speech I mean oration, as these methods were developed preliteracy): legal, political, and ceremonial. In constructing a successful speech, the orator could use three modes of expression: logos (logical argument), pathos (emotional appeals), and ethos (establishing the authority of the speaker). Aristotle divides the process of developing a speech into five stages (the canon of classical rhetoric):

Table 1.1

Invention	finding the most persuasive ways to present information and formulate the argument
Arrangement	the organization of the speech
Style	the use of appropriate and forceful language
Memory	using mnemonic devices so you don't forget your lovely style and arrangement
Delivery	presenting the speech effectively (including projection and appropriate gestures)

One approach to digital rhetoric has been to map these stages or elements onto practices and examples of digital production (and contemporary attempts to connect the rhetorical cannon to digital texts and performances has lead to revival of theoretical work on memory and delivery—the two elements that appear least applicable to print-text arguments).

Roman rhetoricians (notably Cicero and Quintilian) primarily focused on the political uses of rhetoric (drawing on their Greek predecessors, including Gorgias, Plato, Isocrates, and Aristotle). Quintilian was also interested in the ethical dimension of rhetoric (the "good man speaking well").

Medieval and Renaissance Rhetoric

The rise of Christianity in the medieval period led to the devaluation of rhetoric (it was seen as pagan and antithetical to the church) until Augustine recognized that the persuasive modes of rhetoric could be very useful for the church; however, the focus of rhetoric during this period was primarily in the development of rules for preaching and legal letter writing (all in the service of the church). The study of *style* as the most important rhetorical element gained in popularity, particularly in terms of composing verse.

Rhetoric enjoyed a resurgence of sorts during the Renaissance, although the focus was primarily on style, particularly in terms of defining stylistic elements (a move that was in concert with a general interest in taxonomy in a variety of disciplines). One innovation, however, was the application of rhetoric to private discourse (whereas classical rhetoric concerned itself only with public discourse). In the seventeenth century, two opposing camps of rhetoricians emerged—the Ramists (after Peter Ramus) claimed invention and arrangement for the field of dialectic and limited rhetoric to style, memory, and delivery, while the Ciceronians argued for a classical approach to rhetoric that included the five elements of the canon. In the later part of the Renaissance, Francis Bacon argued that the work of science was inquiry and the work of rhetoric was to serve in support of logic by providing "imagination or impression" (Kiernan 2000, 127)—further divorcing rhetoric from the production of knowledge.

Recovering Rhetoric during the Enlightenment

The focus on style that began in the medieval period and continued unabated through the Renaissance was a sore point for Enlightenment

rhetoricians, who worked toward a reformed notion of rhetoric after Locke attacked stylistic ornamentation as an impediment to communication. The call for reform was threefold: rhetoric should rethink its reliance on tropes for invention (and instead focus on observation); syllogistic reasoning should be limited to avoiding fallacies; and clarity should be preferable to ornamental style. The reforms suggested by Bacon and Locke also helped rhetoric ally itself with the new scientific discipline of psychology; this connection led to Bain's "modes of discourse"—modes that mirror the mental processes of description, narration, exposition, argument, and poetry.

Contemporary Approaches to Rhetoric

In the twentieth century, rhetoricians responded to Nietzsche's attack on the quest for objective truth (he argued that knowledge is a social arrangement, rather than an objective entity). I. A. Richards (1930), for instance, argued that meaning is a function of context, and he defines rhetoric broadly as the study of communication and understanding. Kenneth Burke (1966) takes a similarly broad view and considers rhetoric as the study of language as human action that has intentions (motivations) and effects. Burke also considers the ideological function of discourse (connecting people as communities with commonly held beliefs) as an interest of rhetoric.

Chaim Perelman (1982) argues that rhetoric is useful for undermining any claim to any form of knowledge that is absolute (and therefore beyond argument); instead knowledge arises through argument (persuasive rhetoric) within communities that share assumptions and beliefs. Perelman situates the realm of rhetoric as covering the ground between any argument that is not a self-evident truth and arguments that draw persuasive power from coercion or physical force. Bizzell and Herzberg (2001) see

contemporary rhetorical theory as focusing on the "source and status of knowledge," and they regard the work of philosophers who consider language and its relation to knowledge (such as Foucault, Bakhtin, Derrida, and Kristeva) as deeply influential to rhetorical theory (14).

The power of rhetoric, as I see it, is that it can be employed as both analytic method and guide for production of persuasive discourse—and it is both of these capacities that inform my understanding of digital rhetoric. Bizzell and Herzberg (2001) provide a definition of rhetoric-as-method, arguing that "*rhetoric* is synonymous with meaning, for meaning is in use and context, not words themselves. Knowledge and belief are products of persuasion, which seeks to make the arguable seem natural, to turn positions into premises—and it is rhetoric's responsibility to reveal these ideological operations" (14).

I am drawn to this definition because it does not situate rhetorical power within a specific medium of communication (e.g., print or speech); rather it highlights the relationship between rhetoric and knowledge production and meaning-making, not just as a mechanism for persuasion. Similarly focusing on rhetoric as a powerful tool that helps the rhetor produce texts or performances that prompt not just identification but social action, Lloyd Bitzer (1968) argues that "rhetoric is a mode of altering reality, not by the direct application of energy to objects, but by the creation of discourse which changes reality through the mediation of thought and action" (4). While many rhetorical theorists focus primarily on the analytic capacity of rhetoric, it is the value for production that I see as a key resource for the formulation of digital rhetoric.

In a more recent work, Davis and Shadle (2007) consider the value of rhetoric (and pose another fairly expansive definition) as applied to contemporary writing practices:

> [I]n a technological age, rhetoric emerges as a conditional method for humanizing the effect of machines and helping humans to direct them. . . . Rhetoric thinks beyond disciplines and "interdisciplinarity"—itself a product of a culture of specialization—by arranging and connecting diverse elements in the pursuit of theoretical questions and practical applications. Rhetoric is a syncretic and generative practice that creates new knowledge by posing questions differently and uncovering connections that have gone unseen. Its creativity does not exclude or bracket history but often comes from recasting traditional forms and commonplaces in new contexts and questions. (103)

But if the definition of rhetoric can be as broad-based as those espoused by Bizzell and Herzberg and Davis and Shadle, why append a prefix to it at all? What distinguishes "digital rhetoric" from the larger expression of "rhetoric" more generally? I would argue that we need to articulate a specific formulation for digital rhetoric for three reasons: at the level of theory, it allows for the use of and alliance with other fields not typically associated with printed text or speech; it prompts a critical view of current rhetorical theories and methods and opens up the question of whether new theories and new methods can or should be developed; and it provides the boundary condition necessary for the emergence of a new field of study.

In the first instance, I see digital rhetoric as similar to visual rhetoric in the sense that a focus outside of the tradition of written and spoken argument broadens the available opportunities to apply rhetorical theory to new objects of study. Visual rhetoric also draws on theory from art and graphic design as well as psychology (gestalt theory), bringing rhetoric into these spheres even as they contribute to the overall rhetorical methods. Because digital rhetoric incorporates the visual (more on this below), it can align

itself with these fields, as well as other technical fields—such as computer science, game design, and Internet research—that don't usually take up rhetorical theory or methods. Promoting interdisciplinarity has reciprocal benefits, as each field is enriched through the interaction at the level of theory, method, and practice.

Narrowing the purview of rhetoric to focus on digital texts and performances also highlights the difficulties of applying traditional rhetorical theories and methods to new media compositions and networked spaces. Examining the differences between new forms of digital communication and print text or oral discourse requires us to consider whether we can apply traditional rhetorical methods to these new forms or if new methods and theories may need to be developed. Certainly our traditional notions of "memory" and "delivery" have been complicated and expanded as scholars have attempted to map the canon of classical rhetoric to contemporary digital forms. [2] [http://quod.lib.umich.edu/d/dh/13030181.0001.001/--digital-rhetoric-theory-method-practice?g=dculture;id=N1_2;note=ptr;rgn=div1;view=trgt;xc=1] These approaches are taken up in more detail in the following chapter.

Finally, establishing a specific catalog of theories, methods, and objects of study specific to digital rhetoric allows for the emergence of an interdisciplinary field with a distinct identity—one whose members are drawn from a range of disciplines but who have a shared epistemological foundation. My project here is to provide the beginnings of such a catalog and suggest new areas of development for researchers who identify their scholarly specialization specifically as "digital rhetoric" (as, for instance, faculty who teach digital rhetoric courses and the over five hundred members of the H-DigiRhet discussion list).

While rhetoric provides the primary theory and methods for the field of digital rhetoric, the objects of study must be digital (electronic)

compositions rather than speeches or print texts. This is not to say that scholars of digital rhetoric may not make connections between analog and digital objects or focus on the cultural and socio-historical circumstances that lead to, influence, or are imbricated with the construction of digital texts, but that the primary boundary condition for the field is the distinction between analog and digital forms of communication.

Digital

In general usage, "digital" is roughly synonymous with "electronic" or "computerized" and is often used in opposition to its antonym, "analog." In technical terms, digital systems are made up of discrete values whereas analog systems feature a continuous range of values, often represented as a wave (Horak, 2007). As William Pawlett (2007) notes, analog technologies are "based on the principles of similarity, proportion, and resemblance. Digital technologies, by contrast, operate through coded differences rather than proportion or similarity" (79). Although we often use "digital" in reference to computer technologies, any system made up of individual elements satisfies the technical definition: examples of non-computer-based examples of digital systems include writing, Morse code, and the Braille alphabet. Within the context of computer systems and networks, "digital" refers to the encoding of information in binary digits (bits), which may occupy only two distinct states (on or off, 1 or 0).

While the first digital computer, the ENIAC, appeared in 1945, it was Claude Shannon's (1948) "A Mathematical Theory of Communication" that lead the way to our current definition of "digital." In his treatise, Shannon theorized "that the fundamental information content of any message could be represented by a stream of 1s and 0s" (Gaydecki, 13). Digital information streams (encoded as bits) have several distinct advantages over analog signals. Digital data can be more easily replicated in native formats, it can

be compressed (thus improving efficiency in transportation of digital information), and it can be made more secure than analog signals. [3] [http://quod.lib.umich.edu/d/dh/13030181.0001.001/--digital-rhetoric-theory-method-practice?g=dculture;id=N1_3;note=ptr;rgn=div1;view=trgt;xc=1] Additionally, analog signals can be digitized (a critical requirement for multimedia production), at which point they can take advantage of the benefits of digital systems. It is this contemporary use of the term and its particular affordances that I invest with the "digital" prefix in "digital rhetoric."

It is important to remember that "digital," however, also has a connection to the material production of texts, whether in print form or electronic. As Angela Haas (DigiRhet.net, 2005) notes

> Digital also refers to our fingers, our digits, one of the primary ways . . . through which we make sense of the world and with which we write into the world. All writing is digital: digitalis in Latin, means "of or relating to the fingers or toes" or "a coding of information." (242)

Haas goes on to argue that historical forms of written communication that were "executed with the use of fingers and codes—from the Mesopotamian Cuneiform, to Egyptian and Mayan hieroglyphs, to Chinese logograms, to Aztec codices"—constitute the "first artifacts of scientific and technological developments, hence the origins of technical communication, visual rhetoric, and digital rhetoric" (243). This stance echoes Lester Faigley's (1998) argument "that literacy has always been a material, multimedia construct" (6) by virtue of the fact that it is, in the strictest sense, digitally constructed. Faigley traces the materiality of literacy from the Mesopotamian clay tokens (dating from the ninth millennium BCE) through the advent of the printing press and concludes that we have only

recently become "aware of this multidimensionality and materiality because computer technologies have made it possible for many people to produce and publish multimedia presentations" (6).

In *The Language of New Media*, Lev Manovich (2001) argues against using "digital" as the feature that distinguishes new media from old, declaring the significance of the digital to be a "myth" (52–55). Manovich's technical approach, however, loses sight of the possibilities—the affordances—of digitality; similarly, he does not so much address its constraints per se as to posit that certain aspects of the digital (information loss from analog to digital conversion and identical copies of digital works) break down when examined closely. This kind of specific critique, however, does not consider the power of "digital" as an organizing principle; moreover, my concern here is not so much to focus only on "new media" as objects and products of digital rhetoric as it is to extend the power of rhetoric to digital media and practices—that is, not just digital "arts" but digital communication as well. Borrowing from the appropriation of a physics-based metaphor by Young, Becker, and Pike (1970), I would argue that the power of the digital is in its simultaneous instantiation as both particle and (simulated) wave: digital work (and digitized work) can be articulated and rearticulated, reshaped or recreated as (nearly) perfect copies, carrying with those copies and ancillary works an apparent cohesiveness, but digital work is also composed of discrete bits (individual binary digits)—these components enable reconstruction, but they can also be susceptible to fragmentation. The digital, in other words, is also an apt metaphor for the postmodern, representing both simulacra and fissure.

The digital then, both as a new form of production enabled by information and communication technologies and as a reference to the human history of written communication (from nonalphabetic writing to what we traditionally consider "print"), provides a bridge between textual

production (broadly defined to include multimedia) and rhetoric. I would agree with Manovich's (2001) assertion that (print) texts have traditionally "encoded human knowledge and memory, instructed, inspired, convinced, and seduced their readers to adopt new ideas, new ways of interpreting the world, new ideologies"; thus, the printed word (and, I would argue, any material representation of communicative action) has always been "linked to the art of rhetoric" (76–77).

Text

The final element to consider is the notion of digital text—how we choose to define and delimit "text" may circumscribe or open up the objects of study available to digital rhetoric methods. As a student whose early scholarly training was focused solely on literary studies, I initially understood "text" to be a fairly limited term that referenced printed text (and, in particular, literary works); it was not until I began working with cultural studies approaches and postmodern theory that I learned that "any object, collection of objects, or contexts can be 'read' by tracing and retracing the slipping, contradictory network of connections, disconnections, presences, absences, and assemblages that occupy problematic spaces" (Johnson-Eilola 2010, 33). In rhetorical studies, text can be thought of as the container for arguments or persuasive discourse, but that tradition is also usually associated with printed texts (or transcripts of spoken words); for digital rhetoric, we must see text in a far more expansive light.

A good starting point for a broader definition begins with Robert de Beaugrande and Wolfgang Dressler's (1981) approach to "text" as a "communicative event" (1) that meets seven specific criteria of textuality: cohesion, coherence, intentionality, acceptability, informality, situationality, and intertextuality. De Beugrande and Dressler's criteria represent the rhetorical elements of discourse (although they are working in

the discipline of linguistics rather than rhetoric). As explained by Titscher et al. (2000),

> *cohesion* represents the structural components of a text: linguistic elements that obey grammatical rules and dependencies
>
> *coherence* (or textual semantics) constitutes the meaning of a text: "a text creates no sense in itself but only in connection with knowledge of the world and of the text"
>
> *intentionality* relates to the producer's purpose, thus, "talking in one's sleep would not count as a text, whereas a telephone directory would"
>
> *acceptability* "is the mirror of intentionality. A text must be recognized as such by recipients in a particular situation"
>
> *informativity* refers to the quantity of new or expected information in a text
>
> *situationality* is a way of representing that a given text is context-appropriate (this differs from "rhetorical situation" as it focuses more on "appropriateness" than exigence or response
>
> *intertextuality* shows that a given text always relates to preceding or simultaneously occurring discourse. (22–

23) [4] [http://quod.lib.umich.edu/d/dh/13030181.0001.001/--digital-rhetoric-theory-method-practice?g=dculture;id=N1_4;note=ptr;rgn=div1;view=trgt;xc=1]

This set of criteria maps relatively well to a rhetorical approach to text-as-discourse, although the questions of acceptability and the focus on appropriateness in terms of situation make clear that de Beaugrande and Dressler are concerned only with rhetorically *successful* texts, rather than all texts regardless of the quality of their arguments. Ali Darwish (2008), also working within the field of linguistics, adapts de Beaugrande and Dressler's schema but reframes the elements (which he terms "layers," using digital image production as a metaphor) in more explicitly rhetorical terms. Darwish argues that "text" is comprised of six layers: textual, contextual, cultural, temporal, intentionality, and intertextuality (155–56). Darwish finds the layer metaphor useful because each one can be experienced with varying degrees of transparency, depending on the writer's effective use of rhetoric to connect with the reader; as Darwish argues, "the degree of transparency is determined by the reader's ability to analyze the text and process information and by the shared knowledge and intersubjectivity between writer (as conveyed by the text) and reader" (156).

So, from the field of linguistics we have a consideration of the rhetorical features of text as a representation of discourse. To these criteria, we can draw on semiotics to add the experience of text-as-*designed* discourse. In *Literacy in the New Media Age*, Gunther Kress (2003) proposes a theory of text that includes three categories of text (aesthetically valued, culturally significant, and mundane), each of which is expressly the result of specific design choices:

> text is based, however imperfectly, on the understandings of design: an understanding of what the social and cultural

> environment is into which my text is to fit, the purposes it is to achieve, the resources of all kinds that I have implement and realize my design, and the awareness of the characteristics of the sites of appearance of that text. (120)

In Kress's formulation, design encompasses a number of rhetorical elements but does not appear to include "audience" as a design consideration except inasmuch as it is embedded within "the social and cultural environment."

Kress also makes two important observations about text. The first is that text is not merely constituted of meaningful symbols but is "the result of social action," which means that literacy "is always seen as a matter of social action and social forces, and all aspects of literacy are seen as deriving from these actions and forces" (86). This syncs nicely with our definition of rhetoric as the means to move the audience into a state of action (often articulated specifically as social action, although it can certainly also be used to prompt individual action). The second point that Kress emphasizes is that "'text' is a material entity, drawing on the resources" of its mode of expression [5] [http://quod.lib.umich.edu/d/dh/13030181.0001.001/--digital-rhetoric-theory-method-practice?g=dculture;id=N1_5;note=ptr;rgn=div1;view=trgt;xc=1] "to realize the significant features of the social environment in which texts were made, shaped, and organized" (87).

Texts have rhetorical features, originate in and propel social action, and are designed material objects; these qualities provide the primary means of relationship between text and rhetoric-as-use. Stephen Mailloux (2002) clarifies this relationship both in terms of rhetoric as analytic method and productive art:

> Rhetoric deals with effects of texts, persuasive and tropological. By "texts" I mean objects of interpretive attention, whether speech, writing, nonlinguistic practices, or human artifacts of any kind. A production or performance model of rhetoric gives advice to rhetors concerning probable effects on their intended audiences. In contrast . . . a hermeneutic or reception model provides tools for interpreting the rhetorical effects of past or present discourses and other practice and products. (98)

As the definition of text continues to expand to include digital objects that meet the general criteria and associated properties listed above but that also engage a broader range of media, modes, and applications, the analytic capacity of digital rhetoric becomes more likely to provide methods for studying texts that "are not merely *out there*, as objects, but also in motion, gathering other texts around them, responding to their environments in ways both simple and complex, making connections that their authors or readers are participants in" (Johnson-Eilola 2010, 37).

While it is a given that text (like writing) is itself a technology, the affordances of digital production are leading to the development of textual forms that synthesize and enact multiple technologies and media, expanding the notion of text beyond even the fairly broad definitions of discourse-in-material-form presented here. For instance, drawing on Bruce Sterling's (2005) taxonomy of technology types, Johndan Johnson-Eilola (2010) traces the development of text from artifact to product to gizmo to (the as-yet not completely realized) "spime." The key developments in this broader use of "text" that Johnson-Eilola sees for digital rhetoric occur in the articulation of text as "gizmo" and as "spime." Johnson-Eilola argues that "text in the gizmo format represents a dramatic departure from text as product . . . as gizmos, texts are highly unstable and user-alterable in ways

that printed texts are not: They can be moved around, recombined, and transformed" (43). The "spime" takes on the qualities of the text-as-gizmo but is also semiautonomous and networked (Johnson-Eilola 2010, 44). Cory Doctorow (2005) sums up Sterling's definition of "spime" as

> a location-aware, environment-aware, self-logging, self-documenting, uniquely identified object that flings off data about itself and its environment in great quantities. A universe of Spimes is an informational universe, and it is the use of this information that informs the most exciting part of Sterling's argument (n.p.).

Certainly, texts have what Stan Lindsay (1998), drawing on Burke's theory of entelechy, calls "intrinsic persuasion"—an example particularly germane to digital rhetoric is the case of the website, which persuades each user that it is worthy of use, based on design, usability, and accessibility. But the notion of texts that have a kind of agency (e.g., "spimes")—granted via programming by human actors, but making independent decisions nonetheless)—provides a whole new realm of rhetorical objects that can be theorized and studied using rhetorical methods (see the section on methods for a discussion of traditional and developing methods for digital rhetoric analysis).

Now that we have considered the three main elements that must inform any definition of "digital rhetoric"—rhetoric, digital, and text—we can begin to put them together in pursuit of a suitably expansive definition that both provides an appropriate frame of reference and constitutes the boundaries of the field.

Digital Rhetoric

In October of 1989, Richard Lanham presented a lecture on "Digital Rhetoric: Theory, Practice, and Property"—and this appears to be the first use of the term "digital rhetoric." The lecture was published in *Literacy Online* (Tuman, 1992), and again in Lanham's *The Electronic Word: Democracy, Technology, and the Arts* (1993). Lanham begins by making a connection between computer-mediated communication and rhetoric (placed in opposition to philosophical theories about computing, logic, and artificial intelligence): "in *practice* the computer often turns out to be a *rhetorical* device as well as a logical one, that it derives its aesthetic from philosophy's great historical opposite in Western thought and education, the world of rhetoric" (1992, 221).

Lanham suggests that digital production (and the theories that are brought to bear upon all postmodern production, from psychology, evolutionary biology, sociology, and literary theory) will be called to argue for certain positions within the frame of the law (particularly copyright law), which is "rhetoric's ultimate home" (1992, 242). Beyond questions of law and the move toward democratization through art and theory, Lanham argues that "it is the *computer as fulfillment of social thought* that needs explication" (243, emphasis in original) and that classical rhetoric provides the best theoretical frame for undertaking such an explication.

Lanham's approach focuses primarily on features or properties of digital texts as instantiations of approaches that had arisen previously in artistic and literary forms, rather than positing a fully developed theory or definition of digital rhetoric. However, he does sketch out the important connections between postmodern theory, digital arts, and classical rhetoric and finishes the essay by suggesting that an important next move would be to examine the ethics of digital text.

In *The Electronic Word* (1993), Lanham continues to work out his

understanding of the ways in which digital technologies impact the humanities and the role of both technology and rhetoric in higher education, but only in the second chapter (a reprint of the lecture that appeared in *Literacy Online*) does he explicitly evoke "digital rhetoric" as a term of art. One of the drawbacks of this larger collection is that it begins with a chapter that situates his work within literary studies rather than rhetoric, and carries forward this reliance on literary theory, thus implying that digital rhetoric grows out of that subset of rhetorical studies that is the study of literature—rather than the broader and more theoretically robust field of rhetoric as a whole. Lanham thus continues a move that connects digital texts and literary studies, following the lead of the hypertext theorists he cites in his essay (e.g., Barrett, 1988; Bolter, 1991; Landow, 1992).

Early theorists who considered the rhetoric of digital texts focused on hypertext, contrasting hypertextual work with print texts and examining the implications of linking electronic documents in digital networks. While hypertext theory is an important precursor of digital rhetoric, it was fairly limited both in terms of the range of theories used to elucidate what hypertext (ideally) could accomplish and the focus on a fairly narrow construction of hypertext as a specific form. Nonetheless, it is important to gloss this work here, particularly since some contemporary scholars continue to conflate hypertext theory and digital rhetoric.

As with Landow's work, the typical first move in hypertext theory is to connect hypertext to past forms and theories of (print) text. George Landow, editor of *Hyper/Text/Theory* (1994) and author of several influential works on the nature of hypertext contrasts print and digital work thus:

> In contrast to print technology, which foregrounds the

> physical separateness of each text, hypertext reifies the connections between works and thus presents each work as fundamentally connected to others. Hypertext, in other words, embodies or instantiates Roland Barthes's notions of the individual text as the center of a network. (1991, 71)

He goes on to examine what he sees as the fundamental difference and the place at which new forms of rhetorical activity occur—the hypertext link:

> Electronic linking, which generates the fundamental characteristics of hypertext, changes many of the characteristics of text that derive from print, particularly from the physical isolation of the printed work. By inserting the individual text into a network of other texts, this information medium creates a new kind of textual entity—a metatext or hypermedia corpus. (1991, 71)

Stuart Moulthrop (1994) similarly draws on Barthes in his consideration of hypertext, but he moves beyond the function of the link to create metatexts to considering the geography of hypertext as an enactment of Barthes's "social space of writing." He argues that "[a] rhetorical theory of the contour—augmented, perhaps, by a practical technique of contour representation and navigation—could yield an important shift in our understanding of hypertext. It could allow us to move beyond the concept of the text as a fixed hierarchy (a transformation which collaborative, multi-user hypertexts will demand) while at the same time retaining a sense of the text as an articulated process or object-event" ("Contour and Line").

Like Moulthrop, Doug Brent's "Rhetorics of the Web" (1997) shifts the discussion from the nature of hypertext writing to the question of argumentation in networked hypertexts (specifically looking at the World

Wide Web). Brent consciously draws on rhetorical theory and work in literacy studies as opposed to relying primarily on literary theory, which represents an important shift away from "hypertext theory" to "digital rhetoric." He begins by noting that "although hypertext has been used for information retrieval for some time, argument in hypertext is largely a new rhetorical function" (n.p.); he then connects the affordances of digital networks to current theories of rhetoric: "The term 'rhetoric' has expanded well beyond the original meaning of a persuasive argument designed to overpower an audience and bring them over to the speaker's point of view. The 'New Rhetoric' now foregrounds interaction, conversation, and joint construction of knowledge" (n.p.). Brent's invocation of "New Rhetoric" (which comes from Perelman and Olbrechts-Tyteca's work [1969]) is also an important move because the New Rhetoric effectively rescues rhetoric from the Ramistic approach (which limits the purview of rhetoric to "style" or verbal ornamentation) and rejoins it both with the other fields of the classical rhetoric canon and with formal logic.

As digital technologies have continued to develop (at an amazingly brisk pace), the possibilities of constructing hypertext work that includes a variety of media—video, audio, animation, interactive processes—has further marked the departure from our traditional notions of print documents while simultaneously retaining print-based forms within these hypermedia compositions. Thus there has been an increased interest in exploring the possibilities of visual rhetoric(s) as they are foregrounded in digital media. Connecting rhetorical theories of hypertext with visual rhetoric, Gary Heba (1997) suggests the development of a multimedia-based "HyperRhetoric"—"a form of communication that continually invents and reinvents itself through an ongoing negotiation among users, developers, electronic content, and its presentation in a multimedia environment" (22). Heba notes that "from a semiotic perspective, words, images, sounds, textures, smells, tastes, and data markup code in the case of SGML and

HTML, are all capable of producing meaningful information. This idea of multisensory communication, the attendant literacies that accompany them, and the technology required to produce and transmit information combine to form the basic condition of HyperRhetoric" (29). One of the more important contributions of Heba's argument, as I see it, is the acknowledgment of infrastructure as a key element of digital rhetoric practice; in this formulation, materiality is not elided for an abstraction (as often happens in early theories of "the virtual").

After 1997, we see a more concentrated turn toward rhetoric, especially on the part of scholars in communications, computers and writing, and composition/rhetoric who are developing and studying computer-based writing pedagogies. One of the most prevalent current practices for making connections between digital media/communications and rhetorical practices is a move to understand "persuasion" in broad terms; Charles Bazerman (1999), for instance, has described persuasion as "the entire range of actions occurring across all discourse networks" (341). And as James Zappen (2005) notes:

> Studies of the new digital media explain some of the basic characteristics of communication in digital spaces and some of their attendant difficulties. Such basic characteristics function as both affordances and constraints and so help to explain how the new media support and enable the transformation of the old rhetoric of persuasion into a new digital rhetoric that encourages self-expression, participation, and creative collaboration. (320)

Similarly, in his discussion of digital images and classical persuasion, Kevin LaGrandeur (2003) suggests that Aristotle's definition is sufficiently broad to cover a great deal of ground, noting that "our 'available means' have

expanded considerably" since the original definition was postulated, particularly "with the advent of electronic gadgetry like the computer" (120).

Aristotle also asserts that rhetoric takes up the question of the probable, of subjects that "present us with alternative probabilities" (1357a); this declaration clearly places digital texts under the aegis of rhetoric—for digital works always have the potential of embodying multiple readings; in a sense, they always offer alternative probabilities. Keith Kenney reminds us, too, that classical rhetoric "traditionally was considered to be public, contextual, and contingent" (322), and this is certainly applicable to digital communication: not only does it enact probability in its foundation, but it also functions within contextualizing networks that are typically public and also contingent upon connections to other digital texts (this is particularly apparent in the construction of hypertext as a digital genre).

In *Electric Rhetoric: Classical Rhetoric, Oralism, and a New Literacy*, Kathleen Welch (1999) brings together elements of visual rhetoric and screen literacy, arguing that the humanities—and in particular composition/rhetoric—has neglected to theorize video as a compositional medium that bridges print and oral literacies. [6] [http://quod.lib.umich.edu/d/dh/13030181.0001.001/--digital-rhetoric-theory-method-practice?g=dculture;id=N1_6;note=ptr;rgn=div1;view=trgt;xc=1] Welch begins with a strong argument for the value of classical rhetoric as the basis of analyzing new forms of communication:

> Classical rhetoric as a comprehensive system of discourse theory remains unique among the rhetorical theories available to us because it depends on the relationships among rhetoric, history, politics, educational institutions, and, perhaps most

> important, the everyday uses of languages that arise from ideological positioning. It treats not only public and private discourse but also the intricate and interdependent relationships between articulation and thought. And it does so in a way that offers powerful alternatives to the normalized way of viewing knowledge in the modern period. (44–45)

The notion that drawing on classical rhetoric can help defamiliarize contemporary approaches is an interesting one, and she uses this approach as leverage to argue for a stronger theorization that "regenders" and "reraces" classical rhetoric at the same time that she deploys it as an interpretive lens for both video and screen. In order to effectively meet both of her goals, she argues that we should not begin with Aristotle, as most other scholars have, but to go back to the Sophists, and to Isocrates in particular:

> by reconstructing Isocrates, we are able to reconstruct classical rhetoric from a series of inert prescriptions (for example, that classical rhetoric is dominantly oral/aural and that writing is peripheral, not influential, or just another convenient tool) and from lists (for example, that classical rhetoric consists of three kinds of speeches, six parts of an oration and so on) into a comprehensive system that depends on weaving articulation and thought, places an emphasis on the production of discourse, and is not confined to the analysis of discourse. (44)

I would argue that contemporary approaches to rhetoric have already reconstructed classical rhetoric into such a comprehensive system, but this approach is part of a larger surge in scholarly interest in the Sophists and a reevaluation of their usefulness for new forms of composition, particularly those at the intersections of visual and verbal rhetorical forms (see, in

particular, Covino [1994] and McComskey [2002]). Welch's work features in the history of digital rhetoric because it is arguably the first monograph to fully articulate a theorization of screen-based media via classical rhetoric. The primary drawback is that she focuses primarily on a noninteractive form of video, which lends itself more to analysis than production, and does not extend her argument fully to networked digital computers as tools and media of rhetorical production.

Notwithstanding Welch's attempts to do so, in 2002 Michael Cohen argued that no one had yet successfully articulated a "rhetoric of the digital arts"; that, indeed, for digital texts, there is "nothing like the tradition of classical rhetoric, which, among other things, served to contain, arrange, and codify the choices available to an author" (n.p.). But since the advent of networked, multimedia communication, critics and theorists (some of whom I have cited above) have been struggling to develop a rhetorical theory that can account for multimodal communication, and the advent of digital networks and media has brought forth several attempts to harness the power of rhetoric as both an analytic and a mode of production for creating persuasive communicative works enacted via these new forms of media and distribution. The focal point, however, of Cohen's complaint is the lack of a comprehensive digital rhetoric. While several attempts have been made to construct such a program, most have focused on particular aspects of digital production or the critique of digital works. Zappen (2005) contends that current work toward developing digital rhetoric has thus far resulted in "an amalgam of more-or-less discrete components rather than a complete and integrated theory in its own right. These discrete components nonetheless provide at least a partial outline for such a theory, which has potential to contribute to the larger body of rhetorical theory and criticism" (323).

In "Digital Rhetoric: Toward an Integrated Theory" (in part a follow-up to

Zappen, Gurak, & Doheny-Farina's [1997] "Rhetoric, Community, and Cyberspace"), Zappen provides a brief review and synthesis of work that he sees contributing to the establishment of digital rhetoric as an integrated theory, [7] [http://quod.lib.umich.edu/d/dh/13030181.0001.001/--digital-rhetoric-theory-method-practice?g=dculture;id=N1_7;note=ptr;rgn=div1;view=trgt;xc=1] focusing on four major areas:

- the use of rhetorical strategies in production and analysis of digital text
- identifying characteristics, affordances, and constraints of new media
- formation of digital identities
- potential for building social communities (319)

These four elements cover most of the work done by scholars whose work might be categorized as digital rhetoric, and the framework presented here holds up well when considering work published after 2005—and I will return to it as a useful taxonomy (with a few additions) for a more current articulation of the purview and practices of digital rhetoric.

For each element or theme, Zappen reviews the theme presented in three or four works, drawing from a range of disciplines and fields, including communications, literacy studies, sociology, and computers and writing. As I hope will be clear in the next three chapters of this book, digital rhetoric is not tied to a single discipline and, I will suggest, is strengthened by drawing on theories and methods from multiple disciplines and fields while remaining true to its foundation in rhetoric.

Zappen concludes by suggesting that developing "an integrated theory" would offer "new opportunities for inquiry in rhetorical theory and criticism and an expanded vision of what the rhetoric of science and technology might become within the next decade and beyond" (324), but he doesn't offer any suggestions or advice about how to develop such a theory.

Since the publication of "Digital rhetoric: Toward an integrated theory," several scholars have taken up the task of working toward a more coherent and integrated theory. The most detailed approaches appear in the work of Barbara Warnick, Ian Bogost, and Elizabeth Losh (Losh in particular has forwarded the most comprehensive definition/theory to date).

Barbara Warnick's *Rhetoric Online: Persuasion and Politics on the World Wide Web* (2007) was one of the first full monographs to explicitly apply rhetorical theory to the digital texts that reside on the World Wide Web. While Kathleen Welch's (1999) earlier work delved rather deeply into rhetorical theory, her work was directed more at video than digital text; Warnick uses classical rhetoric (from an Aristotelian rather than Sophistic approach) and specifically focuses on political speech presented on the Internet. Warnick begins by invoking Habermas's description of the public sphere and argues that "a good deal of vibrant and effective public discourse in the forms of social activism and resistance occur online, that such discourse has had noticeable effects on society, and that it is therefore worthy of careful study by rhetoricians" (3).

For Warnick, the aim of rhetoric is explicit persuasion and its primary methods for accomplishing this task is through forms of appeal; additionally, the text focuses on analysis through rhetorical criticism and only sketches the value of rhetoric for digital production. Warnick also makes a distinction between rhetoric (forms of appeal), information, and aesthetic elements (which I would call "design" and argue, following

Buchanan [1985], are themselves rhetorical elements):

> Rhetorical forms in online media also include coproduced media discourse, online political campaigns and parody, epideictic discourse in online memorials, and other forms of appeal. Often these are hybrid discourses involving information and aesthetic elements as well as rhetoric, but one of their aims will be more or less explicit appeal to purported audiences in specific communication contexts. (13)

Despite (or perhaps because of) these moves to constrain the functions and methods of rhetoric, Warnick provides a solid foundation for the analytic approach of digital rhetoric that is both compelling and quite accessible. Through a series of case studies that examine "the use of the Web for persuasive communication in political campaigns, activist resistance, and other efforts to raise public awareness of major social and political issues" (122), *Rhetoric Online* focuses on three aspects of digital rhetoric: ethos, interactivity, and intertextuality.

Ethos

After establishing her project as the development of a medium-specific approach to the Web as rhetorical space, focusing on "five elements of the communication process—reception, source, message, time, and space" (27), Warnick moves to the first of the three primary aspects of digital rhetoric addressed in the text: ethos.

Ethos is problematic for a rhetorical analysis of Web-based text because the markers of authorship and expertise are often missing or difficult to find; additionally, "the coproduced, distributed communication environment of the Web presents some challenging questions about message credibility"

(45).

Drawing on assertions about ethos from Aristotle and Hugh Blair, Warnick points out that "prior to the 18th century, notions of ethos were embedded in the cultural and social mores of host societies" (47) and that ethos was revealed through the argument itself rather than connected to the speaker or writer's qualifications. Indeed, in first year writing courses in most universities, students are taught to investigate the credentials of the speaker as a representation of ethos and examine the argument itself as a form of logos that is not itself directly an appeal to ethos; in this case there is strong support for Warnick's contention that

> [p]reoccupation with the status and expertise of the author has thus moved us away from the idea of ethos as a form of artistic proof in the text and toward the idea of source credibility as an external authorizing mechanism for judging the veracity of what is found in the text. (47)

Warnick proposes an adaptation of Stephen Toulmin's model of field-dependence [8] [http://quod.lib.umich.edu/d/dh/13030181.0001.001/--digital-rhetoric-theory-method-practice?g=dculture;id=N1_8;note=ptr;rgn=div1;view=trgt;xc=1] (cf. Toulmin's [1969] *The Uses of Argument*) as a framework for examining ethos in online texts. Using this approach, "the credibility of an argument is evaluated according to the standards indigenous to the field in which the argument is made"; thus, "users may judge sites according to the procedures, content quality and usefulness, functionality, and values and norms important in the field in which the online site operates" (49). Using *Indymedia* (http://www.indymedia.org [http://www.indymedia.org]) as a case study (chosen in part because many of its contributors are anonymous), Warnick applies a field-dependency analysis to show that the site's readers and

contributors “shared values and modes of operation function to enhance the credibility of persuasive messages and arguments posted to the site” (50).

Because her approach focuses on a reception model of media use, Warnick focuses on the ways that ethos may be built for a user community of a particular site but does not extend her analysis to production. And although she notes that users may “rely on a host of factors emerging from a larger system,” including “what other sites link to the site in question, whether its content is supported by other content in the knowledge system . . . how well the site functions, and whether it compares favorably with other sites in the same genre” (49), she does not pursue any of these additional methods for developing or analyzing ethos in digital texts.

Interactivity

Following the chapter on ethos, Warnick shifts focus to “interactivity,” which she links to Kenneth Burke’s articulation of rhetoric as a vehicle for identification, which works particularly well if the object of study is political discourse (as is the case here). Warnick makes a distinction between interactivity as “an attribute of technological functions of the medium, such as hyperlinking, activating media downloads, filling in feedback forms, and playing online games” (69) and user-to-user or text-to-user interaction. Warnick defines interactivity as “communication that includes some form of reciprocal message exchange involving mediation and occurring between [an organization] and users, between users and the site text, or between users and other users,” emphasizing “the contingent transmission of messages back and forth as well as text-based interactivity” (75), where the latter “refers to the presence of various stylistic devices, such as use of first person and active versus passive voice,” the use of photographs, and other elements that “communicate a sense of engaging presence to site visitors” (73).

This sense of interactivity (particularly the notion of text-based interactivity) seems to me to elide the differences between dialogic communication (reader-to-text and user-to-user *interaction*) and interactivity as a quality of digital media. As Farkas and Farkas (2002) note, "[c]ontemporary rhetoricians often view texts as dialog. Readers do not just passively receive information; rather, they interact with the text. By contributing their own thoughts and experiences, readers work with authors to create a unique reading experience. Texts are also dialogic in another sense: To better succeed with their audience, authors instinctively incorporate some of the thinking and attitudes of the audience within their writing" (132). In other words, traditional approaches follow Burke's approach of alignment and identification, but this is not necessarily a function that should be classified as the key property of interactivity.

In the case studies of this chapter, Warnick looks at user-to-user interaction and the opportunities for coproduction of knowledge via websites that facilitate online discussions; contributions of text, image, and video; and organizing tools for face-to-face meetings (the sites in question are moveon.org and georgewbush.com, both of which were analyzed within the context of the 2004 presidential election). In this chapter, Warnick dismisses system-to-user interactivity (which she relegates to functions such as clicking on hyperlinks and customizing site features like font size and image display), noting that she instead "emphasizes forms of interactivity insofar as they function as communication rather than as technologically enabled" (75). This approach is deeply problematic for digital rhetoric, as it essentially argues that the interactive functions of digital systems are a priori arhetorical; this is a limiting move that is similar to characterizing design decisions as outside of the scope of rhetorical analysis (neither of which is a move I can support). A second problem with this approach to "interactivity" is that it constructs it solely through traditional media and therefore privileges a "just apply traditional methods"

approach to the analysis rather than considering whether qualities of new media or digital texts should be considered as new forms, perhaps requiring the development of new theory or method.

Intertextuality

In the final section of *Rhetoric Online*, Warnick considers the role of intertextuality in online environments, primarily using political parody and parody advertisements as examples. The goal of the chapter is to identify "strategies used by Web authors drawing upon intertextuality as a resource" and to consider "the probable roles of Web users as readers when they interpret and are influenced by the texts they encounter" (92). Warnick starts with an overview of intertextuality as developed by Kristeva and informed by Bakhtin, which she extends to multimedia compositions (precisely as previous scholars applied the term to hypertext in the late 1980s and 1990s). There doesn't, however, appear to be any real difference in terms of how intertextuality works in practice regardless of online or offline medium; the main conclusion here is that both constructing and, more importantly for Warnick's analysis, understanding texts that use intertextuality as a rhetorical effect is more easily accomplished: "contemporary users of Web-based discourse have at their fingertips resources that enable them to seek out information in the moment in order to more fully understand and appreciate an intertextual reference" (119).

In the end, Warnick argues that because "the nature of Web-based texts is in many ways very different from that of print texts and monologic speech, many of the models that have been conventionally used by rhetorical critics and analysts will need to be adjusted for the Web environment" (121). I would suggest that while this move to "adjust" our theories and methods is perhaps a necessary first step, it is not a sufficient answer in terms of developing digital rhetoric as a field—I argue that we need to align theories

and methods of classical and contemporary rhetoric to networked texts and new media as objects of study, but we also need to develop new theories and methods to account for gaps in these more traditional approaches. One key point that is made in the conclusion is that there is a significant need for scholars to consider "preservation and a sense of the historical trajectory of the Web's development" (124). This is still a critical gap for digital rhetoric and Internet studies in general (addressed in more detail in chapter 3 [http://quod.lib.umich.edu/d/dh/13030181.0001.001/--digital-rhetoric-theory-method-practice?g=dculture;trgt=div1_ch3;view=fulltext;xc=1] , "Digital Rhetoric: Method").

Partly in response to the limitations of the approach that Warnick takes in *Rhetoric Online*, Ian Bogost (2007) critiques the notion of "digital rhetoric" as it had been articulated through 2007, arguing that its "focus on digital communities of practice, treating the computer primarily as a black-box network appliance, not as an executor of processes" was a significant limitation and that "digital rhetoric tends to focus on the presentation of traditional materials—especially text and images—without accounting for the computational underpinnings of that presentation" (28).

In *Persuasive Games* (2007), Bogost first calls out a gap in digital rhetoric, arguing that simply applying traditional rhetorical methods are not sufficient for the analysis of new media forms (such as computer games and simulations):

> Unfortunately, many efforts to unite computers and rhetoric do not even make appeals to visual rhetoric, instead remaining firmly planted in the traditional frame of verbal and written rhetoric in support of vague notions of "the digital." *Digital rhetoric* typically abstracts the computer as a consideration, focusing on the text and image content a machine might host

> and the communities of practice in which that content is created and used. Email, websites, message boards, blogs, and wikis are examples of these targets. To be sure, all of these digital forms can function rhetorically, and they are worthy of study; like visual rhetoricians, digital rhetoricians hope to revise and reinvent rhetorical theory for a new medium. (25)

Bogost further argues that a whole new branch of rhetoric should be established—one that, like visual rhetoric, takes on analytic methods that are specific to the media and forms that are being critiqued. He calls this approach "procedural rhetoric" because it "addresses the unique properties of computation, like procedurality, to found a new rhetorical practice" (26).

Procedurality is not only limited to computer algorithms or video games; as Bogost defines it,

> *Procedurality* refers to a way of creating, explaining, or understanding processes. And processes define the way things work: the methods, techniques, and logics that drive the operation of systems, from mechanical systems like engines to organizational systems like high schools to conceptual systems like religious faith. (2–3)

For Bogost, however, rhetoric is somewhat simplified relative to the definitions and approaches outlined earlier in this chapter; he simply states that "*Rhetoric* refers to effective and persuasive expression" (3). I read the focus on "expression" as marking this approach as one that buys into a less robust definition and employment of rhetoric, focusing on the outcomes (reception, via style, as Ramus had suggested) rather than the process (as entailed in invention and arrangement). I would also suggest that the notion of "procedurality" is not absent from contemporary understandings

of rhetoric and can be seen as a function even of certain kinds of traditional modes of argument (whether performed in speech, print, or digital forms). For instance, in the introduction to Perelman's *Realm of Rhetoric*, Arnold (1982) notes that "Perelman was led to observe that the acceptability of assumptions about the nature of reality gives some arguments their qualities of rationality; that arguments from example, illustration, and model do not really pretend to be inductions but appear rational by virtue of the 'rules' they imply . . ." (ix).

However, Bogost (2007) makes a compelling case for applying rhetorical principles to a range of digital texts (although the primary—and most compelling—examples are games). He starts by making distinctions among forms of rhetoric based on their application:

> Just as verbal rhetoric is useful for both the orator and the audience, and just as written rhetoric is useful for both the writer and the reader, so procedural rhetoric is useful for both the programmer and the user, the game designer and the player. Procedural rhetoric is a technique for making arguments with computational systems and for unpacking computational arguments others have created. (3)

Bogost's contribution here is important for digital rhetoric, as he identifies an intrinsic quality of digital texts that is not easily or sufficiently addressed by classical rhetorical theory or method (and that is also not directly taken up in accounts of contemporary rhetorical theory or practice). By showing this disconnect between theory and current practice, Bogost reinforces an argument that I will be making in the following sections of this book—namely that digital texts require not just an updating of traditional theory but the development of new rhetorical theories and methods designed to specifically account for the features of digital texts, precisely as Bogost has

done here. The majority of *Persuasive Games* makes the case for procedural rhetoric through examples that show how it can be used as a method of analysis (and, as a game designer himself, Bogost also shows how it informs rhetorical production). One of the key values in this approach is the possibility of revealing the underlying structures and ideologies of certain digital texts—a move that is a central practice of contemporary rhetorical criticism.

When Bogost suggests "*procedural rhetoric* is the practice of using processes persuasively, just as verbal rhetoric is the practice of using oratory persuasively and visual rhetoric is the practice of using images persuasively" (28), he presents a method that can and should be taken up by the field of digital rhetoric, just as visual rhetoric itself becomes a method that can be embedded within digital rhetoric research and scholarship.

Bogost's work also clearly influences Elizabeth Losh's take on digital rhetoric (and additional work on persuasive games) as she articulates it in *Virtualpolitik: An Electronic History of Government Media-Making in a Time of War Scandal, Disaster, Miscommunication, and Mistakes* (2009). Losh presents the most detailed and comprehensive definition of digital rhetoric within current literature, and her study should be considered a foundational text for the field. There are, however, some elements with which I disagree, in particular the attempt to connect rhetoric and mathematically based theories from information science (which have proved problematic in the past as well, when similar moves have been made for traditional approaches to oral and print communication). Losh sets up this move by arguing that "in the standard model of digital rhetoric, literary theory is applied to technological phenomena without considering how technological theories could conversely elucidate new media texts" (47); however, I would argue that to this point, there certainly is no "standard

model of digital rhetoric" and that the work that has been presented in support of the construction of digital rhetoric draws primarily on the broader panoply of classical and contemporary rhetorical theory (considering in particular the work of Welch and Warnick) rather than the limited subset of rhetorical theory and method as applied in literary studies ("literary theory" [9] [http://quod.lib.umich.edu/d/dh/13030181.0001.001/--digital-rhetoric-theory-method-practice?g=dculture;id=N1_9;note=ptr;rgn=div1;view=trgt;xc=1]). However, I would concede the more important point here—that technological theories (as with Bogost's development of "procedural rhetoric") may well add complexity and depth to the field of digital rhetoric.

At the beginning of her chapter on "Digital Rhetoric," Losh identifies four definitions of digital rhetoric (these definitions are not exclusive, and she aims to demonstrate how they can be woven together to create a more comprehensive approach):

> The conventions of new digital genres that are used for everyday discourse, as well as for special occasions, in average people's lives.
>
> Public rhetoric, often in the form of political messages from government institutions, which is represented or recorded through digital technology and disseminated via electronic distributed networks.
>
> The emerging scholarly discipline concerned with the rhetorical interpretation of computer-generated media as objects of study.
>
> Mathematical theories of communication from the field of

> information science, many of which attempt to quantify the amount of uncertainty in a given linguistic exchange or the likely paths through which messages travel. (47–48)

The first definition is the broadest, and it generally follows Zappen's (2005) notion that one way to think about digital rhetoric is the employment of rhetorical techniques in digital texts. Losh considers examples of epideictic, deliberative, and forensic categories of rhetoric (from Aristotle's taxonomy) at work in digital spaces and notes that several situations of online persuasion work within multiple categories. Losh argues that "to have basic competence in digital rhetoric also means to understand the conventions of many new digital genres . . . [as] specific and socially regulated forms of digital text that are composed as files of electronic code" (54). [10] [http://quod.lib.umich.edu/d/dh/13030181.0001.001/--digital-rhetoric-theory-method-practice?g=dculture;id=N1_10;note=ptr;rgn=div1;view=trgt;xc=1] Losh moves from describing what I would call approaches to functional digital literacy to showing the connection to the digital rhetoric scholarship: "studying digital rhetoric involves examining ideologies about concepts like 'freedom' or 'honesty' that are in turn shaped by factors like national, linguistic, theological, or disciplinary identity; societal attitudes about ownership and authorship; and cultural categories of gender, race, sexuality, and class" (56) as they are instantiated (and coded into) new digital genres and forms of digital text.

For this first definition, Losh links practices of digital production and performance to classical rhetorical principles such as *kairos* and Aristotle's categories of rhetoric and discusses ways in which classical rhetoric can be applied to digital texts. For instance, she notes that "rhetoricians since the Greeks have acknowledged [the] central position of audience in rhetorical production, but digital dissemination now makes it possible to deliver even more targeted appeals than one would deliver when speaking to an

interested crowd of heterogeneous spectators" (59–60), and that "classical rhetoric that focuses on public oratory, the appearance and projection of the speaker, and delivery in indoor or outdoor spaces may be remarkably relevant" (63–64) in digital contexts.

The second is not so much a definition as an example of digital rhetoric analysis in practice, focusing on "the digital rhetoric of the virtual state" (80). This portion of her chapter is similar to the approach taken by Warnick (2007) in the sense that the focus is upon the *uses* of rhetoric in the public sphere. Losh examines "four specific twenty-first-century fields in government rhetoric"—institutional branding, public diplomacy, social marketing, and risk communication. For each of these fields, Losh points out the ways in which digital rhetoric is being employed and how digital affordances and constraints affect rhetorical moves made by governments and large organizations when communicating with a range of audiences. While it is instructive to see where digital rhetoric practices are taking place, I do not see this as part of a definition of digital rhetoric so much as it is an example of an analysis of rhetoric as it plays out in specific digital contexts.

The third definition focuses on digital rhetoric as a field of study, the consideration of which is one of the purposes of this project. Losh notes that "there are faculty appointments advertised for professors of 'digital rhetoric' and courses listed in college catalogs on the subject" (82) as a way of establishing that such a field exists within higher education, and she bolsters the consideration of its constitution as a field by establishing a history that begins in the late 1970s and early 1980s. This history is situated, in part, as an extension of media studies (which connects back to McLuhan), but more so to literary studies. Losh traces the term "digital rhetoric" to Lanham's (1992) essay but also draws connections to the work of hypertext theory and to the incorporation of poststructuralist critical

theory by scholars such as Landow and Ulmer. Losh's reading of Lanham also contextualizes it as a response to current debates in literary studies about the "death of print":

> In formulating a disciplinary realm for digital rhetoric, Lanham appeases the traditionalists by attempting to integrate new media studies into a longer rhetorical history. Yet, at the same time, he is alerting his colleagues that a fundamental paradigm shift is taking place in the present moment. . . . In his work on the "sociality of knowledge," Lanham argues that "electronic information" not only changes what is meant by "author" and "text," but also "desubstantializes" the arts and letters, along with the industrial revolution that produced them. (84) [11] [http://quod.lib.umich.edu/d/dh/13030181.0001.001/--digital-rhetoric-theory-method-practice?g=dculture;id=N1_11;note=ptr;rgn=div1;view=trgt;xc=1]

This focus on digital literary studies and hypertext theory is certainly an important part of the history of digital rhetoric, but I would suggest that it leaves out the work of composition/rhetoric scholars who were focused on digital rhetoric as productive method and as practice (as opposed to a narrower focus on digital rhetoric as analysis and critique). There are also scholars in media studies and communications who were exploring the possibilities presented by what they called "information-communication technologies," or ICTs, as transformative processes in fields such as technical communication and education. Thus, while Losh rightly asserts that "the objects of study in much new media scholarship are not very relevant to the political interests of the public at large" such as "[a]rt installations in small galleries, hypertext novels with cult followings, and procedural poems by poets considered too minor to be represented in chain bookstores" (88), I would argue that these are not, in fact, the objects of study of digital rhetoric *per se* but historical precursors from fields that lead

to and inform—but do not constitute—digital rhetoric.

In terms of field development, Losh "sees two possible shortcomings to the bulk of critical work done in digital rhetoric to date: marked tendencies to overlook the rhetoric of the virtual state and to ignore theories about rhetoric from the discipline of computer science" (88). The first of these critiques is answered by her own work in *Virtualpolitik*. And depending on where one draws the boundaries and participants in digital rhetoric, it is possible to find work from scholars in public policy that explicitly consider the virtual state (a term Losh draws from Fountain, 2001) in rhetorical terms (see, for instance, Garson's [2006] *Public Information Technology and E-governance: Managing the Virtual State* and Fountain's [2001] *Building the Virtual State: Information Technology and Institutional Change*).

I find the second critique somewhat more problematic. Losh argues that "despite appeals to those with interdisciplinary credentials, [work in digital rhetoric] often excludes highly relevant literature from technologists who may have a more intimate understanding of the systemic constraints that govern the representation, processing, or retrieval of information that may be central to communicative exchanges effected through digital media," and she also claims that "a basic understanding of both signal theory and network theory is valuable to any contemporary rhetorician" (89). While it is likely that network theory is certainly useful (and, indeed, many more recent works in digital rhetoric and related fields have appropriated theories and methods from network theory, e.g., Rice, 2006; Nakamura, 2008; van Dijk, 2009), prior attempts to synthesize communication theory (meaning the mathematical principles of information encoding and decoding via telecommunications systems) and rhetorical theory have been less than successful.

With regard to the value of formal mathematical theory, I will begin by noting that Perelman and Olbrechts-Tyteca's (1969) evaluation of a great number of argumentative strategies from real-life situations shows that formal logic does not in fact play a role in developing successful argument (in part because it aims for an answer that is certain rather than one that is provisional). They showed that strategies of formal logic and quantification clearly did not belong within the realm of rhetoric at all when it came to the actual practice of rhetorical argumentation.

But the specific information transference model that Losh draws upon (the Shannon-Weaver model) had long been in use as a model of practice for technical communication—with the undesirable effect of treating people whose task it was to help convey information from subject matter experts to lay audiences as mere automata who were instructed to eliminate "noise" in the signal that moved from expert to user. When put into use, this model led to an extremely deficient construction of the value and use of the technical communicator, and it wasn't until it became clear that technical communicators could contribute to projects at the stage of invention (particularly the production of digital texts), which was put forth in terms of user-centered design, that the damage done by this model began to be reversed. Slack, Miller, and Doak (1993) forcefully argued against the model of technical communicator-as-transmitter, instead positing that rhetoricians in the field of technical communication should be seen as both translators of information and as articulators (in the Stuart Hall sense) within the communication network. Slack, Miller, and Doak described the communication theory based on the Shannon-Weaver model as the transmission view of communication because it was developed as a technological schema for transmitting a message from one point to another using telecommunication devices.

Shannon's work (published with Warren Weaver as *A Mathematical Theory*

of Communication in 1949) argued that "the fundamental problem of communication is that of reproducing at one point either exactly or approximately a message selected at another point" (1). In this transmission view, there is no need for rhetoric, as persuasion is not part of the model. In fact, *meaning* is not a part of the model either, as the focus is the transmission of a message (as information) regardless of content. Gilbert Simondon (1989), who calls this a technical theory of communication, makes the fairly obvious critique that a model that sees only a single channel of transmission between only two points must necessarily eliminate most of the complexity of actual human communication.

In *Network Culture: Politics for the Information Age*, Tiziana Terranova (2004) attempts to directly take up Shannon's model (and other elements of information theory that came after) to not only inform an approach to digital rhetoric but to serve essentially as a replacement for rhetoric itself—to provide an analytic method that addresses communication not from a rhetorical standpoint but through an information theory lens. While many of the later chapters in this text do provide useful approaches to developing new theories for digital rhetoric, the first chapter (wherein she introduces the Shannon-Weaver model and argues that it can be read in ways that provide a new way of considering digital communication) ultimately leads to a rephrasing of rhetoric, but in technical terms. When Terranova states that

> information is neither simply a physical domain nor a social construction nor the content of a communication act, nor an immaterial entity set to take over the real, but a specific reorientation of forms of power *and* modes of resistance. On the one hand, it is about a resistance to informational forms of power as they involve techniques of manipulation and containment of the virtuality of the social; and on the other

> hand, it implies a collective engagement with the potential of such informational flows as they displace culture ad help us to see it as the site of a *reinvention* of life (37),

I would suggest that this description could just as easily refer to rhetoric itself (and digital rhetoric in particular, as it is applied to information flows).

Thus, while I do think that some contemporary approaches to information science are valuable contributors to the work of the digital rhetorician (particularly in terms of the development of *methods* that can be used within the practice of digital rhetoric [12] [http://quod.lib.umich.edu/d/dh/13030181.0001.001/--digital-rhetoric-theory-method-practice?g=dculture;id=N1_12;note=ptr;rgn=div1;view=trgt;xc=1]), I would reject the argument that the mathematical approach of "technical" communication theory is in any way a useful departure.

A Note on Competing Terms

Before examining digital rhetoric's relationship to and position within a network of related fields and activities, I want to make a brief digression to examine the relatively few alternative titles that have been suggested by others who are interested in digital rhetoric—but who elect to call it by a different name. There are many examples of terms like "online rhetoric" and "network rhetoric" that appear in a wide range of scholarly literature, but in most cases these use "rhetoric" to refer to choices made by individuals or groups who are promoting a particular argument or ideology rather than as rhetorical theory or method established in online milieu or networked systems. The three main alternative terms that have been suggested are "electric rhetoric," "computational rhetoric," and "technorhetoric."

Electric Rhetoric

Although Welch (1999) used "Electric Rhetoric" as the title of her monograph, its use as a descriptive term for rhetorical analysis of electronic texts did not see much widespread use. Perhaps "electric" is too broad a term; I also believe that electric is tied distinctly to the physical properties and infrastructure of digital text—and while it is important to acknowledge the connection between the digital and the material, the term itself is, I think, a bit too concrete. Another possibility is that Welch's definition itself is too limiting, since she never moves beyond print literacy: "Electric rhetoric, an emergent consciousness or mentalité within discourse communities, is the new merger of the written and the oral, both now newly empowered and reconstructed by electricity and both dependent on print literacy. Electronic technologies have led to electronic consciousness, an awareness . . . that now changes literacy but in no way diminishes it" (104). While Welch's work is pioneering and valuable to digital rhetoric for its approach, I would argue that we need to move beyond only considering orality and print as the dominant literacies available to digital rhetoricians.

Computational Rhetoric

A more recent trend has been to argue that the humanities have neglected the possibilities of computation as a method and that we could develop a "computational rhetoric" that would bridge qualitative and quantitative/algorithmic approaches to humanities research. Some of the main proponents of this term also use methods from computational linguistics, but they use them in the pursuit of rhetorical analyses (see, for instance, Michael Wojcik's [2011] work on sentiment analysis in student writing). This new call for the construction of a computational rhetoric echoes approaches from computer science's subfield of artificial intelligence called argument and computation (which relies on the development of argumentation schema and computational methods for addressing and

processing informal logic and persuasion). Floriana Grasso's (2002) "Toward a Computational Rhetoric" and "Computational Models of Rhetorical Argument," by Crosswhite et al. (2004) are good examples of attempts to use rhetoric to inform the programming of artificial intelligence systems. The main drawback to this approach, and to the current call for its uptake in the humanities and in computers and writing in particular, is its reliance on formal argumentation schema—this is rhetoric-as-argument only, which is as reductive as rhetoric-as-ornamentation, but in the opposite direction. Another issue is the difficulty of representing complex systems purely algorithmically (in a way, computational rhetoric faces the same challenges as attempts to draw on quantitative modeling from information science that I've outlined above). And, contrary to Bogost's assertion that "'digital' gets the materiality of computation wrong" (n.p.), I believe that it is far easier to elide material connections when focusing on computation, which does not have strong and distinct connections to the material in its lineage and etymology in the way that "digital" does.

Computational rhetoric as a model for integrating methods from computer science, linguistics, and rhetoric does have much to offer as a facet of digital rhetoric (and I would suggest that some of the issues that arise within computational rhetoric, such as the consideration of whether nonhuman agents can engage in rhetorical communication [13] [http://quod.lib.umich.edu/d/dh/13030181.0001.001/--digital-rhetoric-theory-method-practice?g=dculture;id=N1_13;note=ptr;rgn=div1;view=trgt;xc=1] is an important question for digital rhetoric as well).

Technorhetoric

The term technorhetoric (or techno-rhetoric) and the related scholarly identity of technorhetorician gained popularity in the computers and writing field in the late 1980s, promoted as a term that evoked both an

interest in rhetorics *of* technology and rhetoric *as* technology (in the sense that it is rooted in techne). [14] [http://quod.lib.umich.edu/d/dh/13030181.0001.001/--digital-rhetoric-theory-method-practice?g=dculture;id=N1_14;note=ptr;rgn=div1;view=trgt;xc=1] As Keith Dorwick (2005) explains it, "the distinction between being a technorhetorician and a rhetorician is a difference of subject matter only: The rhetorics of technology certainly have their own scholarly material . . . but the techniques, the ways of reading the material, are quite similar throughout the entire field. . . . In our subdiscipline, then, we study technology and perhaps most especially in our classrooms, but we are always rhetoricians when we do so" (92, n. 1). More recently, Jimmie Killingsworth (2010) has provided a more formalized definition, calling it "the study, practice, and teaching of electronic literacies, as in the fields of new media studies and computers and composition" (77).

While "technorhetoric" as a portmanteau of "technology" and "rhetoric" works relatively well as a descriptor of the interests and practices of digital rhetoric (and I have used it myself in the past), it doesn't seem to have enjoyed the kind of cross-disciplinary uptake that "digital rhetoric" has seen. For my purposes, I see the use of the term as roughly synonymous with "digital rhetoric" (and would more likely describe myself as a technorhetorician—at least in less formal contexts—than I would call myself a digital rhetorician).

Digital Rhetoric: A Definition

Although I believe that digital rhetoric as a field designation provides opportunities for developing new theories, methods, and practices (and is thus not just a difference of subject matter), Dorwick's point that we approach the questions we are interested in as rhetoricians is really the key element in defining digital rhetoric. In the end, I return to the definition with which I started, but now carrying a richer understanding of the key

terms—rhetoric, digital, and text—that feature in that definition:

The term "digital rhetoric" is perhaps most simply defined as the application of rhetorical theory (as analytic method or heuristic for production) to digital texts and performances.

I would add, following Zappen (2005), that the primary activities within the field of digital rhetoric include

- the use of rhetorical strategies in production and analysis of digital text
- identifying characteristics, affordances, and constraints of new media
- formation of digital identities
- potential for building social communities (319)

but I would add to that list

- inquiry and development of rhetorics *of* technology
- the use of rhetorical methods for uncovering and interrogating ideologies and cultural formation in digital work
- an examination of the rhetorical function of networks

- theorization of agency when interlocutors are as likely to be software agents (or "spimes") as they are human actors

Finally, I would note that digital rhetoric may use any of the rhetorical fields and methods that may be useful in any given inquiry, including those of traditional/classical rhetoric, contemporary theories of rhetoric, visual rhetoric, computational rhetoric, and procedural rhetoric—and that as an interdisciplinary field, it may also avail itself of methods drawn from a wide range of related disciplines.

Digital Rhetoric and . . .

In addition to explicating a definition of digital rhetoric by examining the terms that make up the definition, the way that digital rhetoric functions via theory, method, and practice, the ways in which it constructs itself as a field of inquiry, and the history of the theories, fields, methods, and approaches that have led to our current understanding of the term, it is important also to situate the field within the network of related fields and activities. Following Sullivan and Porter (1993), I believe that "describing the field in terms of a general terrain encompassing several different spheres of activity can maintain a dynamic pluralism and promote an interdisciplinary character" (391–92), which is certainly one of the goals of the present project.

I have selected a number of fields that are closely connected to or inform digital rhetoric (there are others, and a more comprehensive network map of these fields and their interrelationships is the aim of a future project, but the ones I have selected play key roles in my understanding of how digital rhetoric functions as an emerging field in its own right). The fields that I address here are:

Digital literacy (articulated as a requirement of digital rhetoric)

Visual rhetoric (which provides a range of necessary methods)

New media (as the object of study of digital rhetoric)

Human-computer interaction (a related, well-established field)

Critical code studies (a related, emerging field)

I will complete my inventory with an overview of the relationship of digital rhetoric to two broad interdisciplinary approaches in the humanities and social sciences (respectively): digital humanities and Internet studies.

Digital Literacy

Digital literacy is a requirement of digital rhetoric—that is, just as print literacy is necessary for a writer to deploy traditional rhetorical moves, the same is true of digital writing practices. Digital literacy is more complex in some ways because it requires the user to be able to read and write with a number of sign systems (e.g., coded web pages, video, audio, image, animation), each of which has its own functional and critical requirements. The question for digital rhetoric, however, is one of relationships: how do we define digital literacy (in both functional and critical terms) and how does it impact the field of digital rhetoric?

Various scholars have spoken of computer literacy, media literacy,

electronic literacy, or silicon literacy in attempts to identify communicative technology use as a valid domain for literacy instruction; however, others have rejected the coupling of these modifiers with the term "literacy" as it serves to dilute our understanding of (print) literacy. In *Literacy in the New Media Age*, Kress (2003) argues that "*literacy* is the term to use when we make messages using letters as the means of recording that message . . . my approach leaves us with the problem of finding new terms for the uses of the different resources: not therefore 'visual *literacy*' for the use of image; not 'gestural *literacy*' for the use of gesture; and also not musical '*literacy*' or 'soundtrack *literacy*' for the use of sound other than speech; and so on" (23). Kress very specifically differentiates literacy as oriented to writing, although he acknowledges that computer technologies problematize this artificial distinction between modes. It appears that Kress seeks to make a distinction between resource (knowing how to write) and use:

> *Literacy* remains the term which refers to (the knowledge of) the use of the resource of writing. The combination of knowledge of the resource with knowledge of production and perhaps with that of dissemination would have a different name. That separates, what to me is essential, the *sense of what the resource is* and what its potentials are, from associated questions such as those of its *uses*, and the issue of whatever skills are involved in using a resource in wider communicational frames. (24)

While this distinction may be useful for the construction of his social-semiotic theories of language use, it seems to me that separating the resource from the production (use) and dissemination is to decontextualize literacies by dis-embedding them from their social, historical, and cultural milieu; moreover, by limiting "literacy" to "writing with letters" (61), one is forced to separate the written from the visual, despite the inherently visual

nature of writing. If we agree that literacy *is* rooted in sociohistorical contexts (Street, 1984), it must encompass more than the particular sign system of writing with letters. And although literacy itself is multimodal, it is useful to differentiate the particular modes or uses of literacy when seeking to observe the effects of literacy practices; thus, rather than seeking a different name for meaning production that includes more than just writing, I would prefer to couple the concept of literacy as sociohistorically situated practice with a modifier that allows us to make a distinction between those practices that are culturally located within print media and those located within digital media.

In *Teletheory* (1998), Gregory Ulmer argues that "[w]e need a new genre that will give us better access to the thought that video has already given us to think, if not to represent in alphabetic writing" (xii); like Welch, Ulmer focuses here on the image (and video in particular), but his overall body of work has expanded to include the full range of digital media. [15] [http://quod.lib.umich.edu/d/dh/13030181.0001.001/--digital-rhetoric-theory-method-practice?g=dculture;id=N1_15;note=ptr;rgn=div1;view=trgt;xc=1] He suggests "electracy" as the designation for digital literacy; however, his approach is more complex in that he focuses not on literate practice but on literacy as apparatus: "An apparatus is not only a technology (e.g., the alphabet, paper, ink etc.) but also an institution and its practices developed along with the technology" (Memmott 2000, 1). In an interview with Talan Memmott (2000), Ulmer explains that

> "Electracy" is a neologism, then, to give a name to the apparatus of the emerging digital epoch . . . it helps us see the difference between "media literacy" (whose goal is to protect from or defend against electracy by means of forms and practices specific to the previous apparatus; the equivalent for an oral person calling literacy "alphabetic orality"). It also is

> generative in that, knowing by analogy with literacy that digital technological shift is just one part of an apparatus, we may notice that the other parts of the apparatus shift are also well under way—for example that a new institution has emerged within which is being invented the set of practices that will be to electracy what schooling and all that goes with it are to literacy. (1)

While electracy is a useful concept for digital rhetoric, its function as an apparatus (as Ulmer sees it) sets it apart from an understanding of literacy as defined within literacy studies and as I use it here. Unlike digital literacy, electracy is more of a method than a condition, and as such is not a *requirement* for digital rhetoric so much as it is a potential tool.

Selfe and Hawisher (2004) use the term "literacies of technology" "as an all-encompassing phrase to connect social practices, people, technology, values, and literate activity, which, in turn, are embedded in a larger cultural ecology" (2); while I would agree that the term we use should include all of those elements, I see "literacies of technology" as parallel to "rhetorics of technology"—that is, an analysis of how technologies are articulated by those who write about and construct them. The term also implies that technology takes on the values of literacy for itself, which to me evokes Feenberg's (1999) critique of technological determinism (that is, that "decontextualized, self-generating technology" acts "as the foundation of modern life" [78]).

I prefer the term "digital literacy" because I believe it captures the notion that the literacy practices referred to are enacted in digital spaces—I would contrast this sense of media, location, and context with terms such as "computer literacy," which evokes a concept of mere tool use, "internet literacy," which is too specific both in locale and in historical moment, and

"electronic literacy," which is too broad in scope (as it can be seen as referencing any electronic device). "Technological literacy" or "technology literacy" is similarly too broad, as nearly all modes of communication are technologies—so there is no functional distinction between print-based literacy and digital literacy.

However, digital literacy also goes beyond the textual and includes the effective use of symbolic systems, visual representations of language, and digital object manipulation. Snyder (2002) argues that, "in an electronically mediated world, being literate is to do with understanding how the different modalities are combined in complex ways to create meaning. People have to learn to make sense of the iconic systems evident in computer displays—with all the combinations of signs, symbols, pictures, words and sounds" (3). Carmen Luke (2000) frames her articulation of digital literacy practices via the notion of "multiliteracies":

> Meaning-making from the multiple linguistic, audio, and symbolic visual graphics of hypertext means that the cyberspace navigator must draw on a range of knowledges about traditional and newly blended genres or representational conventions, cultural and symbolic codes, as well as linguistically coded and software-driven meanings. (73)

The notion of multiple forms of literacy—of multiliteracies—also informs the way that Selfe and Hawisher (2004) describe the focus of their work in *Literate Lives in the Information Age*: "As the title of our book attests, however, we endorse linking literacy with words, such as *technological*, *digital*, *electronic*, as well as the all encompassing *literacies of technology*. We believe that by naming these abilities *literacies*, we signal the enormous importance they hold for functioning in today's literate world" (1). One of the key elements of Selfe and Hawisher's approach is that they make clear

that their use of the term literacy specifically connects to "communication skills and values—rather than on the skills required to use a computer" (2), thus providing a distinction from the general usage of "computer literacy" as an indication of technological savvy or ability to use specific computer programs and tools. I would suggest, however, that computer literacy is a necessary and embedded component of digital literacy and would be an appropriate name for the functional digital literacy necessary for the development of critical digital literacy and for the use of digital rhetoric.

The definition of "21st century literacies" provided by the National Council of Teachers of English (2008) also takes a multiliteracies approach that situates literate practice as more than just skill-based:

> Literacy has always been a collection of cultural and communicative practices shared among members of particular groups. As society and technology change, so does literacy. Because technology has increased the intensity and complexity of literate environments, the twenty-first century demands that a literate person possess a wide range of abilities and competencies, many literacies. These literacies—from reading online newspapers to participating in virtual classrooms—are multiple, dynamic, and malleable. As in the past, they are inextricably linked with particular histories, life possibilities and social trajectories of individuals and groups. (n.p.)

This definition helpfully includes both computer literacy (skills for using the tools of technology) and the wider critical concerns, as well as pedagogical learning objectives. It is this definition that I will be using when I employ the term "digital literacy" as a requirement of both students and scholars of digital rhetoric.

Visual Rhetoric

While digital literacy is a requirement for using digital rhetoric (either analytically or as a framework for composition), visual rhetoric is an example of a discrete set of methods and theories that are available to use within the digital rhetoric context. At the same time, visual rhetoric parallels digital rhetoric in the sense that it too draws on a number of different fields and disciplines and uses rhetoric as the common theoretical foundation.

In *Defining Visual Rhetorics*, Charles Hill and Marguerite Helmers (2004) address the difficulty of establishing a singular definition, noting that even within the community of rhetoricians who claimed the visual as their object of study,

> there seemed to be very little agreement on the basic nature of the two terms visual and rhetoric. To some, studying the "visual" seemed to consist solely of analyzing representational images, while to others, it could include the study of the visual aspect of pretty much anything created by human hands—a building, a toaster, a written document, an article of clothing—making the study of "visual rhetoric" overlap greatly with the study of design. To still others, the study of visual rhetoric seemed to necessarily involve a study of the process of looking, "the gaze," with all of the psychological and cultural implications that have become wrapped within that term. (ix)

Unlike digital rhetoric, visual rhetoric has a longer history (although the question of definition has remained less than concrete throughout). An oft-cited work that serves as a touchstone for the turn to the visual in rhetorical studies is Roland Barthes's (1977) "The Rhetoric of the Image," wherein he

examines the question of where meaning resides in the image and how we might analyze it using a semiotic approach. Barthes asserts that images function both connotatively and denotatively, and that the connotative signifiers form a rhetoric that serves as the signifying aspect of ideology (49). The rhetoric of the image, he suggests, is subject to physical constraints but that its meaning can be read (at least in part) through a rhetorical analysis of the formal relations of the visual elements that comprise it (50). As Carolyn Handa (2004) points out, "one of Barthes' fundamental points is that in the vast majority of cases, cultures work hard to assure that images to not simply connote, but are clearly anchored, 'denoted' either by verbal text or cultural context, so that their connotative powers do not exert unpredictable effects on their audiences" (134). It is the question of audience and the image's persuasive effect (rather than simply aesthetic effect) that serves as one of the foundational elements of visual rhetoric. In "Images in Advertising: The Need for a Theory of Visual Rhetoric," Linda Scott (1994) provides a literature review that draws on the visual arts, anthropology, and the psychology of pictorial perception in an examination of historical and theoretical approaches to the nature of the image, ultimately arguing (along similar lines as Barthes, although coming from a different perspective) "that images are not merely analogues to visual perception but symbolic artifacts constructed from the conventions of a particular culture" (252).

And, also like digital rhetoric, visual rhetoric functions both as a practice and as a field of study. As Sonja Foss (2004) notes, visual rhetoric can refer both to a visual artifact and to a perspective on the study of visual data: "In the first sense, visual rhetoric is a product individuals create as they use visual symbols for the purpose of communicating. In the second, it is a perspective scholars apply that focuses on the symbolic processes by which visual artifacts perform communication" (304).

Visual rhetoric appears alongside digital rhetoric in a number of contexts, and there are many examples of the use of visual rhetoric methods for digital rhetoric projects. In "Understanding Visual Rhetoric in Digital Writing Environments," Mary Hocks (2003) explicitly connects visual and digital rhetorics and suggests that "because modern information technologies construct meaning as simultaneously verbal, visual, and interactive hybrids, digital rhetoric simply assumes the use of visual rhetoric as well as other modalities" (631). Examples of uses of visual rhetoric in digital rhetoric scholarship range from fairly traditional examinations of visual objects represented digitally to considerations of web and software interface design, to the decoration of the physical objects we use to access online information and carry out digital communications. Paul Heilker and Jason King's (2010) review of the use of visual rhetoric by online autism communities, focusing on the debates about the design of a visual symbol, which shifted from ribbon to puzzle to closed infinity symbol, is a recent example of embedding traditional visual rhetoric analysis within online research (121–22). Visual rhetoric is often invoked in digital rhetoric studies when examining website interfaces, as in Johndan Johnson-Eilola's (2008) extensive use of search engine screenshots, or in the examination of the interfaces of digital composing tools, such as Sean William's (2008) exploration of the process of simulation in Dreamweaver. Considerations of visual rhetoric also extend beyond the screen, as Meredith Zoetewey's (2010) work on "expanding wireless research to include mobile devices' exteriors" (138) in an effort to redefine laptops as objects of inscription by examining the visual choices and ornamentation that users apply to their mobile computers.

A complication for the use of visual rhetoric in a digital rhetoric context is the conflict that arises when the methods of production and analysis are insufficient to fully engage new media. Ian Bogost (2007) has argued that while "there is much value to be gained from the study of images in all

media . . . in procedural media like videogames, images are frequently constructed, selected, or sequenced in code, making the stock tools of visual rhetoric inadequate. Image is subordinate to process" (23–24). Thus, while visual rhetoric and digital rhetoric are often intertwined and are closely related in a number of ways, it is clear that visual rhetoric's methods address only one aspect of digital rhetoric analysis and production.

New Media

Like digital rhetoric (and visual rhetoric), the term "new media" has been the subject of competing interpretations and definitions. Most approaches consider new media a description of a particular kind of object (or text, using the expansive definition of that term), although there has also been some attempt to use new media as a kind of self-reflexive term for the study of new media objects as well. One of the difficulties with the term is that it doesn't have clear referents to prior fields (at least, not directly, as "media" is not the equivalent of "media studies") and both elements have been contested: when do particular media stop being "new"? And are the "media" of "new media" necessarily or obviously digital? Thus, I begin this brief overview of new media with the caveat that the definitions I have chosen to draw on are both contemporary and contingent and that I agree with Packer and Jordan's (2001) assessment that

> Digital media's peculiar nature challenges traditional categories; this in itself is an aspect of its radical character. But there is value in proposing and discussing alternative definitions of digital media—even if these definitions are contingent, bracketed by circumstances. In fact, it may be best to regard them as contingent, because our experience with digital media is so fresh, and where it leads so unclear. The definitions of today will inevitably be replaced tomorrow, as

new applications for digital media emerge over time. (xxxii)

Some approaches treat new media as equivalent to multimedia. Cynthia Selfe (2004) defines "new media" as "texts created primarily in digital environments, composed in multiple media (e.g., film, video, audio, among others), and designed for presentation and exchange in digital venues" (43). This definition follows the same trajectory as Randall Packer and Ken Jordan's (2001) description of multimedia: "while not all computer-based media is multimedia, today's multimedia starts with the computer, and takes the greatest advantage of the computer's capability for personal expression" (xvii). Two of the key elements of multimedia shared by new media are the mixing of media and the requirement for users of both forms to engage multiple literacies (thus, as for digital rhetoric, digital literacy is a requirement of new media use and production). Selfe (2004), arguing for new media as a form of writing that should be taught in composition courses and curricula, describes the relationship between new media as text and traditional print by pointing out that "although such texts often include some alphabetic features, they also typically resist containment by alphabetic systems, demanding the multiple literacies of seeing and listening and manipulating, as well as those of writing and reading" (43).

In *Remediation: Understanding New Media* (1999), Jay Bolter and Richard Grusin focus not on defining new media based on unique features or the affordances of digital (re)production but instead examine how new media reshape and reconfigure "old" media when they are drawn into the mix and play of new media composing. Their work, like others that follow, considers new media in larger historical and cultural contexts, which is (in part) an extension of (not-new) media studies approaches. Bolter and Grusin suggest that new media must be defined through its relationship with older media:

> No medium today, and certainly no single media event, seems to do its cultural work in isolation from other media, any more than it works in isolation from other social and economic forces. What is new about new media comes from the particular ways in which they refashion older media and the ways in which they refashion older media and the ways in which older media refashion themselves to answer the challenges of new media. (15)

Perhaps the most comprehensive approach to defining new media is Lev Manovich's influential *The Language of New Media* (2001). Manovich draws on the histories of art, photography, video, telecommunication, design, and cinema to develop his theory and definition of new media (although he does draw on literary theory, rhetoric is otherwise absent from his consideration). In his articulation of new media as cultural object, he both includes and expands Bolter and Grusin's notion that new media draw upon and reshape older media, claiming that "new media objects are cultural objects; thus, any new media object—whether a Web site, computer game, or digital image—can be said to represent, as well as help construct, some outside referent: a physically existing object, historical information presented in other documents, a system of categories currently employed by culture as a whole or by particular social groups" (15).

Manovich argues that what separates new media from other media is that the underlying structure of all new media is computer-accessible numerical data. For Manovich, "the translation of all existing media into numerical data accessible through computers" is the foundation of new media, which is composed of "graphics, moving images, sounds, shapes, spaces, and texts that have become computable; that is, they comprise simply another set of computer data" (20). From this premise, Manovich proposes five principles of new media: numerical representation, modularity, automation,

variability, and transcoding. These are not so much features of new media that can be identified as they are formations that work on new media objects and whose effects are embedded within but not always immediately identifiable as contributing to the new media composition itself. The explication of these principles and their application as a test for delineating new media from other media forms serves as a methodological framework; ultimately, Manovich provides a rhetorical method [16] [http://quod.lib.umich.edu/d/dh/13030181.0001.001/--digital-rhetoric-theory-method-practice?g=dculture;id=N1_16;note=ptr;rgn=div1;view=trgt;xc=1] for constructing and elucidating new media texts. The basic functions of these five principles are:

Numerical Representation. New media are composed of digital code and thus subject to algorithmic manipulation; that is, they become programmable. All of the other principles follow from this first assertion. [17] [http://quod.lib.umich.edu/d/dh/13030181.0001.001/--digital-rhetoric-theory-method-practice?g=dculture;id=N1_17;note=ptr;rgn=div1;view=trgt;xc=1]

Modularity. New media texts are composed of discrete units and can be combined into larger objects without losing their independence. Some examples of this principle include the embedding of objects (images, charts, graphs) in word processing documents whose original sources may be independently edited, the distinct media elements in web pages, and the modular nature of the World Wide Web itself.

Automation. The first two principles, numerical representation (coding) and modular structure "allow for the automation of many operations involved in

media creation, manipulation, and access" (32).

Variability. Also related to terms such as mutable and liquid, variability represents the non-fixed nature of new media. Variability is also a possible result of automation: "Instead of identical copies, a new media object typically gives rise to many different versions. And rather than being created completely by a human author, these versions are often in part automatically assembled by a computer" (36).

Transcoding. New media consist of two distinct layers—the cultural layer and the computer layer; "the logic of a computer can be expected to significantly influence the traditional cultural logic of media; that is, we may expect that the computer layer will affect the cultural layer" (46).

While Manovich provides a methodological approach, Packer and Jordan (2001) propose a different list of five elements. However, this list focuses on observable features of new media rather than principles. Packer and Jordan claim that these five characteristics of new media in aggregate define it as a medium distinct from all others:

Integration: the combining of artistic forms and technology into a hybrid form of expression.

Interactivity: the ability of the user to manipulate and affect her experience of media directly, and to communicate with others through media.

> *Hypermedia*: the linking of separate media elements to one another that create a trail of personal association.
>
> *Immersion*: the experience of entering into the simulation or suggestion of a three-dimensional environment.
>
> *Narrativity*: aesthetic and formal strategies that derive from the above concepts, which result in nonlinear story forms and media presentation (xxxv).

One of the key differences in approach between Manovich's principles and Packer and Jordan's characteristics is that the latter can be more easily used when considering new media in terms of objects, while the former sees new media also in terms of processes of formation. Both of these lists, however, assume that new media is necessarily digital. Anne Wysocki (2004) proposes a very different approach, one that places the new media function in the hands of the designer:

> We should call "new media texts" those that have been made by composers who are aware of the range of materialities of texts and who then highlight the materiality: such composers design texts that help readers/consumers/viewers stay alert to how any text—like its composers and readers—doesn't function independently of how it is made and in what contexts. (15)

One of the implications of this definition is that new media texts do not have to be digital. Wysocki uses Manovich's argument against using "interactivity" as a feature specific to new media because it is a contested term that may function both at the physical and psychological levels, and, as Wysocki notes, "his arguments portray how a process that can seem unique

to digital texts can be more complexly connected to other ways we understand who we are and how we function" (2004, 17). Wysocki also works against Manovich's definition of new media as composed of computer data because "there are no human agents in that definition, with the implication that the process of translation [of existing media into numerical data] is natural and inexorable" (18).

Regardless of which definition of new media one uses, for digital rhetoric, it is an object of study that is subject to rhetorical theory and principles. Each of the proposed definitions and frameworks works well within a digital rhetoric context and each contributes to the theoretical and methodological approaches available to the digital rhetorician. A more explicit connection between new media and rhetoric is featured in Collin Brooke's (2009) *Lingua Fracta: Toward a Rhetoric of New Media*. The title of the work immediately situates new media as an object of study (as with "a rhetoric of technology" or "a rhetoric of science," each of which develops and catalogs the ways that specific uses of language and rhetorical practices embedded in those uses propel the persuasive power of technology and science, respectively). Brooke's project (to which I will refer in detail in chapter 2 [http://quod.lib.umich.edu/d/dh/13030181.0001.001/--digital-rhetoric-theory-method-practice?g=dculture;trgt=div1_ch2;view=fulltext;xc=1]) "is located in between technology and rhetoric, using the canons [of classical rhetoric] to come to grips with new media at the same time that it acknowledges the changes that the canons must undergo in the context of new media" (xii). Brooke avoids the question of defining new media (although he references the contributions of both Manovich and Wysocki), and instead situates new media as a process or activity that occurs at the interface, which "functions as a dialectical space, in Burke's terms, and a rhetorical space *par excellence* . . . the interface is where rhetoric and technology meet" (xiii). Although he doesn't name it as such, Brooke's project is an excellent example of digital rhetoric scholarship that takes new media as its object of

critique.

Human-Computer Interaction (HCI)

Having considered requirements, related rhetorical methods, and objects of study for digital rhetoric research and practice, I turn now to locating digital rhetoric as a field and its relationship to other, related fields, focusing on the examples of human-computer interaction (HCI) and the emergent field of critical code studies. I have chosen these two fields as examples because they come from very different disciplines and perspectives, yet both are closely related to digital rhetoric in terms of both methods and objects of study. One of the key connections between HCI and digital rhetoric is the importance of the interface—for digital rhetoric, the interface is both object and location; it serves as the point at which software, hardware, user, network, the virtual and the material come together. One of the key tasks for HCI is the development and programming of interfaces (which activity, I suggest, would benefit from collaboration with researchers who study the rhetorical functions of the interface).

HCI is an interdisciplinary field that draws on psychology, cognitive science, and sociology but is situated within computer science. In *Human-Computer Interaction*, Dix, Finlay, Abowd, and Beale (1993) claim that HCI "is, put simply, the study of people, computer technology, and the ways these influence each other" (xiii). Based on this very broad definition, it is clear that there are strong possible relationships between the work of HCI and digital rhetoric (indeed, that definition could just as well be a definition of digital rhetoric). However, much of the work of HCI is focused on producing hardware, software, and interfaces (rather than on communication, meaning-making, knowledge construction, or persuasion); in a way, HCI provides the tools and systems that support new media, networks, and other digital applications that digital rhetoric aims to study.

H. Rex Hartson (1998) offers a more specific definition:

> Human-Computer Interaction (HCI) is a field of research and development, methodology, theory, and practice, with the objective of designing, constructing, and evaluating computer-based interactive systems—including hardware, software, input/output devices, displays, training and documentation—so that people can use them efficiently, effectively, safely, and with satisfaction. (103)

While HCI is clearly more aligned with computer science and computer engineering than with communications, it shares with digital rhetoric (and a number of related writing-studies fields, such as technical communication and computers and writing) a focus on how people use technological systems to accomplish a wide range of tasks, and the deployment of terms such as "user" and "usability" also provide a connection between these fields. Thomas Skeen (2009), for instance, argues that "there is some overlap between the fields of rhetoric and HCI. One parallel is the issue of user empowerment. Whereas rhetoric . . . concerns itself with power, knowledge, and access by taking into consideration the different loci of power that exist simultaneously with users, designers, and the larger cultural context, the HCI field also concerns itself with user-centric empowerment as an ideal. As they consider the user's wants and needs, an ideal of democratization and empowerment exists in both fields" (102).

Given such an alignment of interests, it seems clear that a relationship between HCI and digital rhetoric would be mutually beneficial, particularly with regard to each field's interest in and commitment to usability. This is only one among several possible connections, but it is one whose interests are more obviously aligned with digital rhetoric than others. While HCI is one established field that could both benefit from and contribute to digital

rhetoric, the same may hold true for emergent fields such as critical code studies and software studies.

Critical Code Studies

In 2006, Mark Marino proposed that the methods of literary analysis (in the form of critical hermeneutics) be applied to the reading of code. Marino situates his proposal as complementary to a number of new approaches that were developed around the same time, including software studies and platform studies. Unlike these other approaches, critical code studies is of interest because it relies explicitly on rhetorical methods. Each of these new fields is interested in a synthesis of humanities- and computer-science-based approaches to understanding how meaning is made at the human-computer interface; the primary difference is whether the focus should be on the platform (discrete systems that include both hardware and software, like the Nintendo Wii or Sony PlayStation), software, or code.

In the case of platform studies, researchers "[investigate] the relationships between the hardware and software design of computing systems and the creative works produced on those systems" (Bogost & Monfort 2006, n.p.). The Software Studies Initiative (2007), in contrast, takes a much wider view of the scope of software studies: "we think of software as a layer that permeates all areas of contemporary societies. Therefore, if we want to understand contemporary techniques of control, communication, representation, simulation, analysis, decision-making, memory, vision, writing, and interaction, our analysis can't be complete until we consider this software layer" (n.p). Critical code studies aims to examine the infrastructure behind the software by examining the code itself:

> Critical Code Studies (CCS) is an approach that applies critical hermeneutics to the interpretation of computer code, program

> architecture, and documentation within a socio-historical context. CCS holds that lines of code are not value-neutral and can be analyzed using the theoretical approaches applied to other semiotic systems in addition to particular interpretive methods developed particularly for the discussions of programs. (Marino 2006, n.p.)

Marino (2006) proposes that "we no longer speak of the code as a text in metaphorical terms, but that we begin to analyze and explicate code as a text, as a sign system with its own rhetoric, as verbal communication that possesses significance in excess of its functional utility. While computer scientists can theorize on the most useful approaches to code, humanities scholars can help by conjecturing on the meaning of code to all those who encounter it both directly by reading it or indirectly by encountering the effects of the programs it creates"—and it is this articulation of critical code studies that resonates as a digital rhetoric approach.

A 2011 HASTAC Scholars forum [18] [http://quod.lib.umich.edu/d/dh/13030181.0001.001/--digital-rhetoric-theory-method-practice?g=dculture;id=N1_18;note=ptr;rgn=div1;view=trgt;xc=1] suggested that critical code studies, as the practice of looking at code from a humanistic perspective, addresses questions such as

> What does it mean to look at the code not just from the perspective of what it "does" computationally, but how it works as a semiotic system, a cultural object, and as a medium for communication?
>
> How do issues of race, class, gender and sexuality emerge in the study of source code?

and

> What insights does code offer to the cultural critique of a digital object?

Much like literary studies is a branch of rhetoric that engages in a very focused examination of specific textual genres using a wide range of critical methods and theories, critical code studies can be seen as a subfield of digital rhetoric that takes code as its central object of study.

Digital Rhetoric, Digital Humanities, and Internet Studies

Critical code studies and human-computer interaction are only two examples among several possible where developing relationships with scholars and practitioners between these fields and digital rhetoric may be beneficial, and indeed this is certainly an incomplete map of the location of digital rhetoric with respect to other fields, disciplines, methods, and approaches. It is my hope that digital rhetoricians will continue to build networks and connections, extending the map (or even contesting my cartographic impulses by drawing new routes and new boundaries). Before continuing on to the chapters that review digital rhetoric theories, methods, and practices, I want to end this chapter with a consideration of two larger interdisciplinary constructions within which work on digital rhetoric circulates: digital humanities and Internet studies.

Digital humanities is currently used as a kind of catch-all description for a very broad range of approaches and methods that involve use of digital technologies (from geographical information systems, to 3-D modeling and simulation, to large-scale text mining and data visualization) to study

humanities subjects (including history, art history, literature, and archaeology). Discussing the creation of the Office of Digital Humanities (ODH) within the National Endowment for the Humanities (NEH), director Brett Bobley (2008) explains that his office uses "'digital humanities' as an umbrella term for a number of different activities that surround technology and humanities scholarship. Under the digital humanities rubric, I would include topics like open access to materials, intellectual property rights, tool development, digital libraries, data mining, born-digital preservation, multimedia publication, visualization, GIS, digital reconstruction, study of the impact of technology on numerous fields, technology for teaching and learning, sustainability models, and many others" (1).

Despite this expansive view of topics, relatively few projects in digital rhetoric have been funded by the NEH; more projects have focused on developing tools and processes for working with historical works that have now been digitized. Bobley goes on to say that

> In one way or another, most of these digital humanities activities involve collections of cultural heritage materials, which are one of the primary objects of study for researchers across all humanities disciplines. Books, newspapers, journals, paintings, music, film, audio, sculpture, and other materials form a primary dataset for study. (1)

What's missing here is the development of collections of new cultural materials that are "born-digital" and the development of methods and methodologies for both studying and producing these new forms. I suspect that as the realm of digital humanities matures, there will be a strong turn in this direction, and I would suggest that digital rhetoric is well positioned to participate in and contribute to the digital humanities when it does so.

An additional concern comes from the position of rhetoric vis-à-vis the humanities more generally speaking. Historically, the core discipline of the humanities (from which others emerged over time) is rhetoric, yet rhetoric no longer appears to have a distinct identity as a discipline and is often overlooked as the foundation of the humanities. We can trace the problem back to Peter Ramus and his move to divorce all but style from the purview of rhetoric, as well as the way that nascent English departments drew on the works of Hugh Blair, Alexander Jamison, and other belletristic rhetoricians as the basis for the study of literature in the vernacular. [19] [http://quod.lib.umich.edu/d/dh/13030181.0001.001/--digital-rhetoric-theory-method-practice?g=dculture;id=N1_19;note=ptr;rgn=div1;view=trgt;xc=1] Digital rhetoric provides an opportunity to reclaim not just the neglected canons of memory and delivery, but to follow the work of contemporary rhetoricians who have been attempting to recover the full power of rhetoric and stake out a stronger claim within the continuing construction of digital humanities.

There are certainly ways that digital rhetoric can participate in the digital humanities alongside literary studies and history (particularly since the majority of methodologies in these disciplines are derived from rhetoric), but digital rhetoric also has much to offer the social science equivalent of the digital humanities, which is generally designated “Internet studies.”

Internet studies emerged from the fields of computer-supported cooperative work (CSCW), sociology, and communications. Barry Wellman, one of the earliest advocates for applying a social network approach (see Wellman, 1997) to the Internet, traces the beginnings of the field to roughly 1994 and divides the first decade of its history into three “ages”: theorizing the Internet (often uncritically); systematic documentation of users and uses; and real analysis based in theoretically driven projects (Wellman, 2004). To date, I have not seen digital rhetoric making many inroads in the conferences and journals of Internet studies. But there is a rich body of

work that can contribute to digital rhetoric, particularly in terms of methods and methodologies (several of which will be discussed in chapter 3 [http://quod.lib.umich.edu/d/dh/13030181.0001.001/--digital-rhetoric-theory-method-practice?g=dculture;trgt=div1_ch3;view=fulltext;xc=1]). At the same time, social networking theory is commensurate with a digital rhetoric approach to the study of networked communication, so there is also an opportunity to connect at the level of theory as well.

I end this chapter, then, with a charge to those of us who characterize our work as digital rhetoric—we must work to bring our theories and methods into the fields of the digital humanities and Internet studies because we have much to offer in both realms; we also have excellent opportunities to learn from and incorporate the work that is central to these fields as well.