Information technologies radically alter social and organizational structures and the nature and definition of their textual productions, distributing these structures in space and time and facilitating the production of texts by multiple authors with multiple intentions, addressed to multiple audiences, and comprised of verbal, visual, and audio components. The deployment and use of these information technologies stretches and challenges traditional notions of rhetoric by unsettling conventional notions of authorship, authorial intention, and the nature and definition of oral and written texts. Nonetheless, the rhetorical tradition offers rich resources for the collaborative design of distributed, digitized texts. This paper reviews some of the scholarship that is attempting to capture and explain the digital text; sketches some rhetorics of collaboration that might inform the design and production of digital texts; and offers an illustration of such a collaborative design practice, based upon my own experience in a community-based information-technology project.

The Distributed, Digitized Text

Unlike paper texts, digital texts are no longer individual expressions of the intentions of individual authors but complex systems of elements distributed in and beyond space and time and equally complex sets of relationships distributed among authors, users, and systems and among verbal, visual, and audio components. Shoshana Zuboff observes that as information technologies restructure organizations by redistributing data entry and access they also produce more dynamic and fluid digital texts (172). These texts are no longer discrete entities but comprehensive systems of elements built into the structure of information systems, constituted by multiple authors, and reconstituted at any time from any place. (179-80). The distributed, digitized text is a double-edged sword, inviting disorientation and fragmentation, on the one hand, and collaboration and coordination, on the other. The digital text, Zuboff writes, “does not have an author in the conventional sense” and thus “can elicit a sense of otherness in the reader” and a “loss of meaning and context” (180). But the digital text “can also be the
occasion for the construction of new meaning” (180). As Zuboff and Maxmin observe, rather than being diluted, digital information can increase in value “as it is distributed, allowing more people to do more with more, as it enables collaboration and coordination across space and time” (293).

Digitized texts are distributed not only among multiple authors but also among multiple audiences, who reconstitute the multiple elements—verbal, visual, audio—that constitute these texts and thus in turn become the authors of their own digitized texts. Barbara Warnick observes that digital texts—and web texts in particular—are distributed systems—de-centered tissues of quotations created with and for disaggregated audiences—which cannot assume either a stable authorial intent or a linear structure (“Looking to the Future,” 329-31). Lev Manovich observes, moreover, that these distributed and de-centered texts are themselves endlessly mutable and variable since their verbal, visual, and/or audio components can be reconstituted by countless human actors or even by computers (36). Digital texts are thus, Warnick observes, characteristically “corporate and multiple-authored” (“Looking to the Future” 330). They invite, as Zuboff and Maxmin suggest, “collaboration and coordination” (293).

Finally, these digitized texts, precisely because they are constituted and reconstituted by multiple authors with multiple intentions, necessarily address a variety of (seemingly incompatible) purposes, including not only persuasion but also self-expression, social interaction, contestation and collaboration, and the formation of individual and communal identities. These purposes, though seemingly incompatible, are in fact reciprocal and interrelated. The World Wide Web, for example, though seemingly a venue for the expression of individual identities, is in fact a web of interrelationships. Warnick notes that whereas early studies of the Web focused upon the identifiable authorship of individual webs and issues of source credibility, more recent studies situate the individual web within the context of “the larger networked system of which it is a part” (“Looking to the Future,” 331). Warnick’s studies of political parody webs in recent presidential elections, for example, describe these webs as networks of relationships—juxtapositions of candidates’ and parodists’ webs, candidates’ and parodists’ speeches, candidates’ actions and their words, etc.—with opportunities for interactivity via conventional links and, more recently, blogs, online forums, town meetings, and the like (Critical Literacy, 95-111; “Looking to the Future,” 330). Kathleen Welch observes, moreover, how even an individual web, such as her feminist-
rhetoric web, can function as a network of relationships, fostering participation, collaboration, and mutual inquiry, “including strong disagreements” (177-182, 186). Carolyn Miller and Dawn Shepherd demonstrate how blogs, too, though seemingly venues for self-expression and the formation of individual identities, are in fact both self- and other-directed, both individual and communal. Blogs, they observe, are venues for both “self-expression and community development.” Bloggers mark their commentaries and their linking as modes of self-expression, self-disclosure for the purpose of self-clarification and self-validation and the enhancing of self-awareness, with the self as her own audience. But bloggers also intend for their blogs to be read by others and thus seek connections with others as signs of approval, acceptance, and value. Thus they implicitly acknowledge the community-building function of blogs.

Rhetorics of Collaboration

The distributed, digitized text thus stretches and challenges rhetorics that presuppose a unitary authorship, audience, or purpose. As Warnick observes, digitized texts may not be readily amenable to “critical approaches that assume authorial intent and linear structure” (“Looking to the Future,” 331). But the rhetorical tradition has rich resources to bring to the collaborative design of digital texts, including theories that address the problem of multiple authors, audiences, and purposes. Most prominent among these resources, of course, is the dialectic and rhetoric of Kenneth Burke. Less prominent as a rhetorical theory is the work of Mikhail Bakhtin, who is resistant and even hostile toward rhetoric but who nonetheless offers a glimpse of what a rhetoric with multiple authors and multiple perspectives might be. Burke and Bakhtin were near contemporaries and share a concern with the relativity/relativism of the human condition and a hope for linguistic form as a constructive response to this condition. But they lived and wrote in vastly different cultural settings and pursued their studies of language and the human condition in quite different but nonetheless complementary directions. Writing against the backdrop of the Great Depression of the 1930s, Burke feels keenly the intellectual, social, and economic instability and relativism of his time, and he develops a rhetoric of form as a means of promoting social cohesion. Writing in the aftermath of the Russian revolution, the political chaos of the 1920s, and the Stalinist terror that followed, Bakhtin celebrates difference and diversity and explores new dialogic forms such as the polyphonic novel and carnivalistic laughter as models and exemplars of community and communication.
Burke’s concern for the relativity of human interpretations and motives leads him to develop a rhetoric of form directed toward social cooperation and social action. Greig Henderson claims that “Burke’s entire corpus is directed toward coming to terms with a relativistic universe,” with the lurking danger of “an endless catalog of terministic screens,” for which our primary and perhaps our only recourse is a rhetoric directed toward social cohesion (116-17, 123). Burke’s interest in developing a rhetoric of social cooperation is evident in the early work and brought to fruition in the dialectic and rhetoric of *A Grammar of Motives* and *A Rhetoric of Motives*, in the diversity and openness of interpretation in the former and the press toward closure via identification and social cooperation in the latter. Dialectic, for Burke, is the study of the attribution of motives through an examination of an act, the person (or agent) who performs the act, its place and time (or scene), its intent (or purpose), and its means (or agency) (*A Grammar of Motives*, xv). Rhetoric, for Burke, is “the use of language as a symbolic means of inducing cooperation in beings that by nature respond to symbols” (*A Rhetoric of Motives*, 43). An author induces cooperation, according to Burke, by identifying his or her ways with those of the audience, in what may be a simple case of persuasion (55). But an author may also induce cooperation in the more complex case in which the author persuades both the audience and him- or herself. In this context, rhetoric assumes a transformative power and becomes not (only) a rhetoric of persuasion but also a rhetoric of collaboration and social cooperation. In *A Rhetoric of Motives*, Burke explains how “purely formal patterns can readily awaken an attitude of collaborative expectancy in us” (58). Imagine, he writes, a series of oppositions (a repetitive form)—“we do this, but they on the other hand do that; we stay here, but they go there; we look up, but they look down”—or consider the political impact of a series of gradations (*gradatio*) such as the following (both a repetitive and qualitative form)—“Who controls Berlin, controls Germany; who controls Germany controls Europe; who controls Europe controls the world” (58). In each case, the audience finds itself, almost imperceptibly, “swinging along” with the form and thus, by “collaborating’ with the form . . . prepares for assent to the matter identified with it” (58). In the more complex case in which an author persuades him- or herself, “ideas or images [are] privately addressed to the individual self for moralistic or incantatory purposes” (38-39). In this case, the rhetoric of form has a socializing and moralizing force but depends for its effects upon social cooperation—an active collaboration between author and audience: “The individual person, striving to form himself [or herself] in accordance with the
communicative norms that match the cooperative ways of his [or her] society, is by the same token concerned with the rhetoric of identification,” of “consubstantiality,” by which an author seeks “to change an audience’s opinion in one respect” but can succeed only to the extent that he or she “yields to that audience’s opinions in other respects” (39, 55-56). Such a rhetoric of form, Burke supposes, might help us to overcome the relativity of human interpretations and motives and its unfortunate consequences.

Whereas Burke seeks to overcome the relativism of his time through social cooperation, Bakhtin celebrates relativity (though not relativism) as an antidote to rhetorical (and presumably also political) monologism. Bakhtin is quite critical, even bitter, about traditional rhetoric, which he perceives to be authoritarian and monological, characterized by a “one-sided seriousness” and a “stupid fetish for definition or singleness of meaning” (Problems of Dostoevsky’s Poetics, 107, 132). Even the traditional deliberative, forensic, and epideictic genres, he claims, though inherently dialogical, nonetheless exhibit a mere diversity of voices that lend themselves to purely formal, logical modes of analysis (“Discourse in the Novel,” 353-54). As an alternative to these monologic discourses, Bakhtin delineates new dialogic forms, among them Dostoevsky’s polyphonic novel, which is produced via a creative process in which author, characters, and readers all participate as equals. Bakhtin claims that the polyphonic novel offers a new way of thinking about human communities and human communication, a celebration of the relativity of multiple voices and multiple points of view. The polyphonic novel is not just a new novelistic genre but also a new mode of human thought, a special kind of “polyphonic artistic thinking,” set forth not in a series of propositions but in an artistic visualization of “the thinking human consciousness and the dialogic sphere in which this consciousness exists” (Problems of Dostoevsky’s Poetics, 270-71). Bakhtin explains the polyphonic novel by analogy with Einstein’s theory of relativity. The polyphonic novel, he claims, depicts “a plurality of independent and unmerged voices and consciousnesses, a polyphony of fully valid voices . . . with equal rights and each with its own world” (6). Unlike the monologic novel, which provides a vehicle for the authors’ own ideological positions, Dostoevsky’s polyphonic novel situates the author not above, on a higher plane of existence, but alongside the characters, who thus become “not only objects of authorial discourse but also subjects of their own directly signifying discourse” (7). The polyphonic novel thus provides a vision of a plurality of voices, including both author and characters, meeting but not merging on the same plane of existence and constituting a higher or second-
order unity that resembles “the complex unity of an Einsteinian universe” (16). The reader, too, participates in this plurality of voices and indeed must participate since the interaction among the author and the characters “provides no support for the viewer who would objectify an entire event according to some ordinary monologic category (thematically, lyrically or cognitively)—and this consequently makes the viewer also a participant” (18). According to Bakhtin, Dostoevsky’s polyphonic novel is dialogic in the sense that it is not planned a priori but rather unfolds “not in the past, but right now, that is, in the real present of the creative process” (63). Like Burke’s rhetoric of form, Bakhtin’s polyphonic alternative to traditional rhetoric thus depends upon an active and ongoing collaboration between author and reader or audience.

Collaborative Design of a Distributed, Digitized Text: An Illustration*

The nature of the distributed, digitized text emphasizes the need for collaborative rhetorical practices and the design of rhetorical products that capture the perspectives of multiple authors and multiple intentions and direct them toward responsible social actions and outcomes. Rhetorics of collaboration provide models for such a rhetorical practice and have inspired and shaped my own efforts (with colleagues Sibel Adali and Terresa M. Harrison) to induce cooperation among multiple contributors to the design and implementation of a youth-services information system for Troy and Rensselaer County, New York, called Connected Kids, http://www.connectedkids.info/ (Figure 1, Connected Kids Information System). The information system includes a self-service database with an easy-to-use copy-and-paste data-entry function; separate search interfaces for parents, teens, and kids; customizable web pages for individual organizations; and galleries of children’s artwork and photos—all accessible via the World Wide Web—plus a distribution network extending the reach of the system to low income families at the Troy Housing Authority. Sponsored by the National Science Foundation’s Digital Government Research Program, with additional support from the 3Com Urban Challenge Program, the database is intended as a mechanism for delivering information about youth-services programs, services, and activities from local governments, youth-services organizations, and public and private schools to families and children within the city and county (and eventually, throughout the greater Capital Region).

Such a venture requires collaboration among many individuals and groups: multiple funding organizations; city and county governments; local youth-services organizations; school systems; computer programmers, interface designers, and usability testers;
faculty and graduate and undergraduate students; and, not least, families and children. The model of collaboration is necessarily cooperative and egalitarian rather than hierarchical and authoritarian, cyclical rather than linear, a bazaar rather than a cathedral (Raymond 19-63), a creative polyphony rather than a monologue or even a dialogue. The products, given the medium and the audience of families and children, are to the fullest extent possible dynamic, interactive, and visually stimulating—a composite of verbal, visual, and audio elements. In a curious twist on Burke’s notion of form, these products are, moreover, contributing factors in the collaborative process, for the formal elements of the products act upon the participants and invite further elaborations and enhancements of the system, in a process that is creative or generative of new possibilities rather than (merely) persuasive. These principles of creative polyphony and collaborative form impact virtually every aspect of the system but are perhaps most readily evident in the galleries of artwork and photos (Figure 2, Connected Kids Art and Photo Galleries).

The galleries originated as an attempt to offer local content as the only viable alternative that we could imagine to competition with large-scale commercial operations (Disney, Nintendo, Sega, etc.) and as a visual mode of presentation of information about youth-oriented programs and activities. Initially, the galleries offered simple matrices of thumbnail photos with pop-up windows for larger images representing the programs and activities of several local youth-services organizations. They have gradually become a more collaborative venture in which the formal elements of the medium contribute to the ongoing process of development. Through a process of trial and error, we realized, fairly quickly, that users preferred a clickable slideshow to the more static matrices and the inevitable clutter of the pop-up windows. We also learned that the individual organizations preferred to retain their own organizational identities within the larger framework of the galleries, so we created a separate slideshow of artwork or photos for each organization (Figures 3-6). We also created appropriate background images for some of the slideshows, and, initially (I am the guilty party in this instance), we included a verbal overview as the initial slide in some of the slideshows with a single caption for all of the images (Figure 3, Slideshow with Text and Caption). To no one’s surprise (except my own), no one who has visited the galleries has ever read the verbal overview. Since we are a youth-services information system, with a commitment to deliver substantive information to our local users, we looked for alternatives to the verbal overview of programs and activities. At this point, the organizations, swinging along
with the form, helped us to develop individual captions for each photo, and one of the organizations, the Troy Boys & Girls Club, also created its own background image (Figure 4, Slideshow with Customizable Background, Captions). Next, we developed some photo collages, as a kind of visual overview (to replace the verbal overview), for use as the initial slide in some of the slideshows (Figure 5, Slideshow with Collage, Captions). Finally, as an experiment, we have recorded a brief audio narrative to accompany some of the photos (Figure 6, Slideshow with Collage, Captions, Audio Narrative).

In this way, the galleries are becoming a true polyphony of voices representing many of our youth-services organizations and eventually, we hope, all of them. The galleries are also, in a curious sense, participants in the design process since their formal elements—both the elements built into the design and the formal elements inherent in the medium—encourage users to swing along and contribute to the ongoing developments, creating colorful backgrounds, writing captions, recording their stories, etc. These galleries are distributed, digitized texts in the sense that they are created by multiple authors for multiple audiences as composites of verbal, visual, and audio elements. They are also reflections of multiple intentions or purposes: attempts by the youth-services organizations to persuade visitors to the system to visit their organizations and enjoy their programs and activities, of course, but also opportunities for self-expression by both the organizations and the children represented via the artwork and photos, opportunities for social interactions among the organizations and their constituent populations, and contributions to the larger effort to build a social identity and a social community in support of positive activities for young people.

*This material is based upon work supported by the National Science Foundation under Grant No. 0091505. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.*
Endnotes

1 Castells; Manovich; Warnick, “Looking to the Future”; Zappen, “Digital Rhetoric”; Zuboff; Zuboff and Maxmin.

2 Manovich; Warnick, “Looking to the Future.”


10 Crusius, 24-30; Henderson, *Kenneth Burke* 32-34, 130-35; Wolin, 149-60, 171-85. Citations for these works and for *A Grammar of Motives* and *A Rhetoric of Motives* are included in the text.


12 But Wolin, 84-85, suggests that Burke’s emphasis upon rhetoric as *addressed* underscores the continuity of his rhetoric with traditional rhetorical principles.

13 Citations for “Discourse in the Novel” and *Problems of Dostoevsky’s Poetics* are included in the text.

14 Emerson, 150-51, 154-56; Holquist, 20-21, 158-62.

15 Morson and Emerson, 243-46.

16 Raymond, 19-63, uses the metaphors of the cathedral and the bazaar to suggest the differences between traditional hierarchical approaches to software development and more collaborative approaches, such as the open-source movement, as represented by Linux.
Works Cited


**Figure 1. Connected Kids Information System**

**Figure 2. Connected Kids Art and Photo Galleries**
Troy Public Library

Figure 3. Slideshow with Text, Caption

Troy Boys & Girls Club

Troy Boys & Girls Club Computer Activities

Figure 4. Slideshow with Customized Background, Captions
Troy Family YMCA Healthy Kids Day April 8, 2006

Figure 5. Slideshow with Collage, Captions

Welcome to the City of Troy

Figure 6. Slideshow with Collage, Captions, Audio Narrative