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WRITING IN EMERGING GENRES
Student Web Sites in Writing and Writing-Intensive Classes

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Writers are living, in the fullest sense of the ancient Chinese proverb, in interesting times. Not since the fifteenth century, when Gutenberg perfected a workable system of movable type, has there been such a change in how information and ideas are exchanged. In the late fifteenth century, Gutenberg's technological innovations resulted in the widespread availability of printed work in vernacular languages, a factor that scholars such as Eisenstein (1979) argue contributed to the Protestant Reformation, the expansion of the Italian Renaissance, and the rise of the scientific method, among other movements. In the late twentieth and early twenty-first centuries, the Internet, and in particular the World Wide Web, has had what appears to be a similar effect on the means through which we communicate with each other. Whether the rise of networked communications will result in the widespread social, political, cultural, and economic changes attributed to the printing press remains uncertain, although numerous scholars have argued that it will (Dertouzos, 1997; Dewar 1998; Kaplan 1995; Negroponte 1995). What is certain, from a writer's point of view, is that the rules of writing have changed. Publication is no longer assumed to be linked to a printing press. Nor is it necessarily linked to well-defined print genres. As the Web has grown to encompass literally billions of sites and, despite the best efforts of Google and Yahoo! countless billions of pages, the range of expression has grown as well.

That range of expression poses opportunities for experienced writers. In much the same way that writers of English prose in the fifteenth and sixteenth centuries viewed the printing press as an opportunity to experiment with genre, contemporary writers have been experimenting with forms of expression made possible by network technologies. Unfortunately for readers, those experiments—like many of those of the Early Modern period—have been far from universally successful. Readers have found it difficult to anticipate the structure of and locate information within hypertextual documents published on the World Wide Web.

Consensus has not yet been achieved among Web developers about the functions and format of particular design elements, such as buttons and menus. And the frequent changes in the style and design of online documents, despite the best intentions of their authors, have often left readers frustrated and bewildered.

Like writers in the fifteenth and sixteenth centuries, we are in a period of transition. Despite the rapid growth of the Web, it remains very much a place of experimentation and adaptation. As de Casiol and Dyson argue, digital documents "have not yet developed a complete set of conventions that enable us to characterise them into genres" (2002, 165). Nonetheless, although stable genres are yet to emerge (Siddler 2002), other scholars suggest that some genres are in the process of emerging, such as the home page (Dillon and Gushrowski 2000), digital broadsheet (Watters and Shepherd 1997), resource list page (Crowston and Williams 2000), and discussion list page (Bauman 1999). Each of these emerging Web genres can be seen as arising from a recurring social situation: the personal home page, for example, as the presentation of self, or subject, in a highly condensed form to a large, likely unknowable audience. Concurrently, a number of print genres, among them the magazine article, scholarly journal article, the press release, and the opinion column, are being successfully adapted—or, to use Bolter and Grusin's (1999) term, *remeditated*—for publication on the Web (Crowston and Williams 2000; Rho and Gedeon 2000). It is clear, however, that much remains in flux—and is likely to remain so for years to come.

This poses significant difficulties for writers new to the Web. In particular, it poses difficulties for student writers, whose efforts have been confined largely to print genres such as essays and reports. It also poses difficulties for teachers who ask students in writing and writing-intensive courses to create Web documents. Unfortunately, we know relatively little about the difficulties students face as they attempt to negotiate the complexities of writing documents intended for publication on the Web. Although much has been written about the use of hypertexts and Web sites in writing and writing-intensive classrooms (Chapman 1999; Mauriello, Pagnucci, and Winner 1999; Walker 2002; Williams 2001), the published literature reveals little about how student writers learn to negotiate the challenges of writing such documents. Wickliff and Yancey (2001) offer one of the few reports of students writing Web sites for the first time. Although their discussion of the efforts of university honors students to create a classwide Web site focused primarily on the students'

use of visual elements, their conclusion—that these gifted students "performed much like basic writers when challenged with acquiring a broad set of new visual and computer literacy skills" (177)—suggests that even our strongest students will encounter difficulties as they move from composing genres that are typically published in print to those typically published on the Web. This conclusion is echoed, to some extent, by Edwards and McKee's description in chapter 10 of this book of their efforts to support the writing of Web sites in first-year composition classes, although Edwards and McKee report a greater degree of success in their classes than did Wickliff and Yancey and offer a more comprehensive set of recommendations about teaching Web writing.

In this chapter, I explore the efforts of students in three writing and writing-intensive classes to create Web sites. These Web sites served as the final project for each course. Drawing on interviews with the students and their teachers as well as analysis of the student sites, I will chart the efforts of students to understand the constraints and possibilities of emerging Web genres.

WEB GENRES: EMERGING CONVENTIONS

Web sites have been assigned for several years in writing and writing-intensive courses. And scholars have considered the constraints and possibilities of such documents—and, more broadly, of hypertexts—for decades (e.g., Bolter 1991, 1993; Bush 1945, 1967; Conklin 1987; Kaplan 1995; Nelson 1983; Slatin 1990). Yet the quickly shifting technological landscape of the Web, and the tools used to create documents distributed on the Web, have worked against the creation of stable genre definitions for Web documents.

In large part, this is because the defining characteristic of the Web—the link—allows writers to compose documents that have little resemblance to the linear print documents with which readers and writers are most familiar. The ability to create links has resulted in new ways to conceptualize transitions between and within Web documents. Footnotes and endnotes, for example, can be replaced with links to pop-up windows containing notes or with links to source documents. Although footnotes and endnotes are used in a number of remediated Web documents (Bolter and Grusin 1999), such as publications in online scholarly journals, writers are seldom *expected* to use them. Instead, footnotes and endnotes have become another linking strategy that writers *might* use.

The ability to create links has worked against the development of standardized organizational structures for documents published on the Web. Consider, for example, the wide range of organizational structures for scholarly articles published in journals housed on the Web, such as *Kairos* (http://english.ttu.edu/kairos), *Across the Disciplines* (http://wac.colostate.edu/atd), and *Enculturation (http://enculturation.gmu.edu)*. Unlike scholarly articles published in print journals, which rely almost exclusively on a linear (page 1, page 2, page 3) structure, scholarly articles published on the Web might adopt structures that are

- linear: navigation is restricted to adjacent pages (e.g., next, previous)
- hierarchical: navigation is possible only up (to a "parent" page) or down (to "child" pages)
- interlinked: navigation is possible between all pages
- combined: navigation is possible using a combination of the three other structures

Figure 1 provides an example of a combined structure that uses linear, hierarchical, and interlinked structures.

Document structure is closely related to the organization of documents. However, because individual pages can have specific organizational patterns, such as chronology or cause-effect, it is typically distinguished from organization per se. Recently, scholars such as Vaughan and Dillon (2000) have begun to refer to the structure of documents published on the Web using the term *shape*. Noting that the widely divergent structures of such documents can be difficult for readers to easily internalize and predict, they suggest that some shapes may be more appropriate for specific types of documents—such as news articles—than others. If so, and if some consensus can be arrived at concerning appropriate document shapes, we might find that certain shapes will become associated with emerging Web genres.

The ability to create links also affects a writer's choice of navigation tools—the means by which readers move through a Web site. Web developers typically provide readers with navigation support, such as menus, tables of contents, navigation headers and footers, site search tools, and graphical site maps (see figure 2). Even relatively simple Web sites tend to display navigation menus or headers, since these aids will allow readers not only to move to specific pages, but also to understand the content and purpose of the site. Over the past several years, navigation tools have become somewhat conventionalized. Side menus—often in the form of
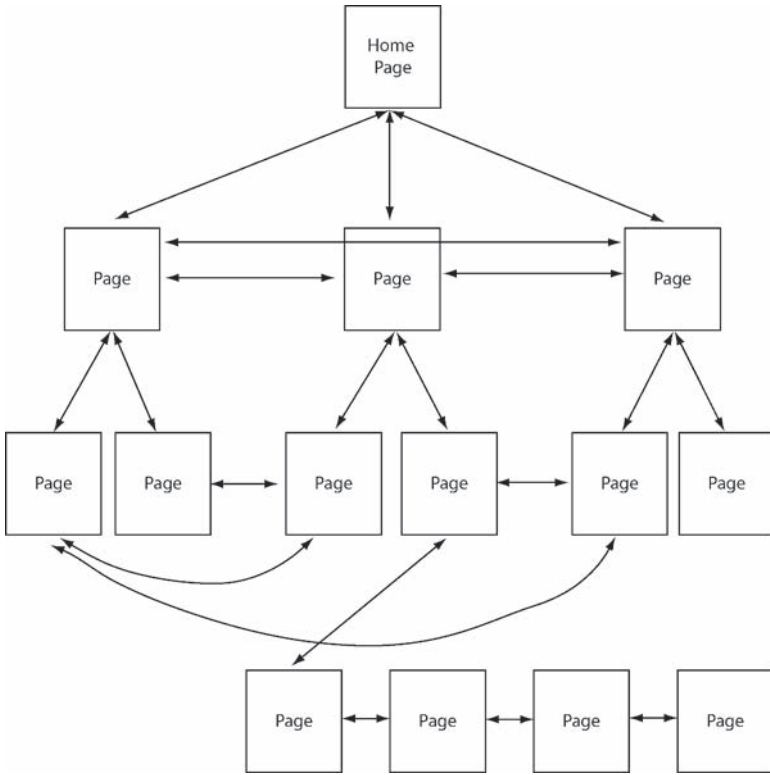
Figure 1: A combined document structure includes linear, interlinked, and hierarchical elements.

lists or buttons—have become a standard part of most complex sites. And a growing number of sites have begun to provide top menus that expand in a manner similar to the menus on word processing programs and other commonly used software applications.

The ability to link to and embed in Web documents a wider range of illustrations than is possible in print documents also increases the range of possibilities with which Web developers can work. In addition to the images, tables, charts, and graphs frequently used in print documents, documents published on the Web can include audio and video clips, animations, java applets such as mortgage calculators, embedded program files, and links to information stored in a database. Spreadsheets, tables, or charts, for example, can allow readers to better understand a topic or to engage in "what if" scenarios by changing the information or sorting on various categories. An image, such as a map of the western United States, can be transformed into a clickable map so that clicking on a
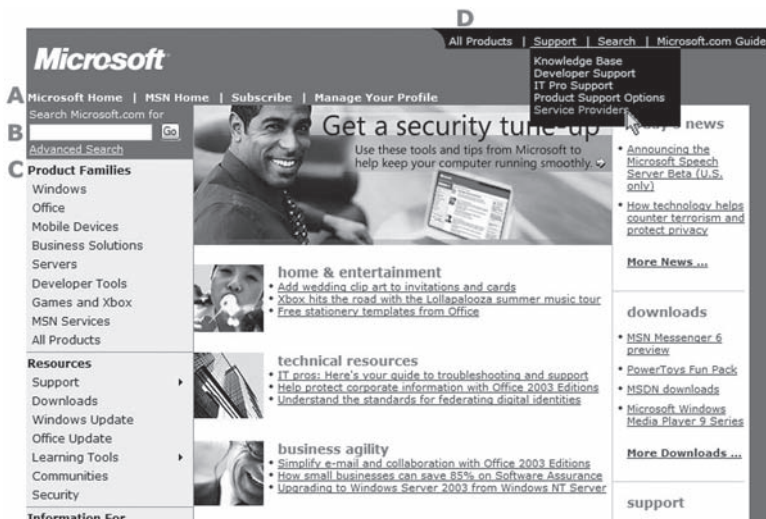
Figure 2: The Microsoft Web site, circa 2003, provides a navigation header (A), a search tool (B), a side menu (C), and a drop-down menu (D).

particular city or state would allow readers to obtain information about that city or state.

The expanded choices concerning document structure, navigation tools, and illustrations have worked against the quick emergence of genre conventions for Web documents. However, in the area of page design— the layout of text and illustrations on a Web page—conventions appear to be emerging. Page design typically reflects the social and commercial purposes of a Web site, with Web portals, such as Lycos, Yahoo! and MSN.com favoring a design that literally crams as much information as possible into a page and search sites such as Google and AllTheWeb.com opting for designs that highlight their primary function (see figure 3). Similarly, a number of commercial sites—including both news and information sites, such as CNN.com and the *New York Times Online*, and corporate sites, such as Microsoft.com and Sears.com—have adopted a design consistent with the digital broadsheet genre that Watters and Shepherd (1997) identified several years ago (see figure 4). This design mimics the front pages of newspapers and the tables of contents found in many mainstream magazines, allowing them to provide a large amount of information in a small space. In general, pages within Web sites, in particular those that provide "content," are increasingly adopting a design that sandwiches text and illustrations between page banners, navigation menus, and navigation headers and footers. Salon.com provides an example of a design adopted

Figure 3: The simple, uncluttered design of the Google home page calls attention to its primary functions and search types.

Figure 4: The CNN.com site uses a design consistent with the digital broadsheet genre.

Figure 5: A widely used Web page design. The page banner, navigation header and footer (not shown), and side menu frame the main content of the page.

by a number of Web sites, with the text and illustrations—in this case, of an article—placed within a column bordered by links to related information, advertisements, and other pages on the site (see figure 5).

Although attempts have been made to define genres among Web documents, the pace of technological change works against their definition. It remains uncertain whether the conventions that are beginning to emerge will withstand the continuing pace of technological development.

SIX STUDENTS WRITING FOR THE WEB: AN EXPLORATORY STUDY

To better understand how student writers learn and adapt to writing in the shifting landscape of the Web, I interviewed six student writers (all identified pseudonymously here): two each from a speech communications course, an undergraduate Web development course, and a graduate Web writing course, and examined the Web sites they created.

- Jessica was a senior speech communications major. She planned to attend graduate school in communication theory. Her site focused on forms and effects of propaganda.
- Reid was a senior speech communication major who planned to pursue a career in a communications field. His site focused on the history and varieties of contemporary Christian music.
- Ellen was a senior writing major. She planned to seek a career in grant writing and public relations. Her site focused on the work and life of Emily Dickinson.
- Kathy was a nontraditional student who was completing her junior year. A writing major in the English department, she had decided to establish a small business that facilitated the formation of student book groups. Her site supported that business.
- Callie was a second-year MFA candidate focusing on fiction and nonfiction. A former accountant, she had enrolled in graduate school in her mid-thirties to pursue a career in writing and literary publishing. Her Web site consisted of a collection of linked nonfiction vignettes and short essays about her family.
- Paul was a first-year master's candidate who had enrolled in graduate school after a successful career as a small businessman. He intended to pursue a career as a writer and consultant. His site consisted of a collection of essays about a bicyclist following the Lewis and Clark Trail.

I selected students from the three classes to increase the likelihood of obtaining findings that were not influenced by the genre conventions suggested by a particular faculty member. The speech course was taught by a

faculty member who had been working with the Web since the mid-1990s. The undergraduate Web development class was taught by an instructor with three years' experience designing and editing Web sites and four years' experience teaching composition and creative writing. I taught the graduate workshop, bringing to the classroom seventeen years of experience teaching writing and seven years' experience teaching Web design. I recruited students from the speech communication course through a class presentation. I recruited students in the writing courses via electronic mail. I waited until the semester was completed and grades had been submitted to recruit students from the graduate workshop.

The three classes introduced students to Web design by teaching HTML coding. The two writing classes allowed students to use WYSIWYG (what you see is what you get) Web editors, such as Macromedia Dreamweaver or Microsoft FrontPage, after they had demonstrated proficiency with HTML code. The instructor of the speech class did not allow students to use a WYSIWYG Web editor.

In the interviews, I asked students to reflect on their experiences reading and developing documents for the Web, to discuss issues that I hoped would allow me to estimate their understanding of the Web as "genred," to describe the writing processes they had followed to create their Web sites, and to reflect on how those processes differed from those they used to write print documents. My questions directed their attention to the four issues discussed above—document structure, navigation tools, digital illustrations, and page design. My examination of their Web sites focused on those issues as well.

RESULTS AND DISCUSSION

In general, students in the three classes produced effective Web sites, with the graduate and undergraduate writing students, predictably, producing more polished and usable sites than those in the speech communication course, and the graduate students producing the most polished and best-written sites. In part, these findings stem from the amount of instruction provided in Web development in the three courses.

The three courses represent a spectrum of instruction. The speech communication course focused on exploring the theoretical differences between face-to-face, group, and mediated communication. As is the case in most writing-intensive courses, the Web assignment served as one of many activities covered in the course. As a final project, it received significant attention throughout the second half of the course, but it was

not the only activity to which the students and instructor devoted their class-related time. The instructor provided a general template for the assignment: a minimum of five pages, including a home page and a works cited page, and some sort of navigation support for readers. The intermediate Web development course focused on the theoretical and practical differences between print and digital documents. Students were required to complete three academic essays, which focused on the analysis of Web sites and online communities, and two Web sites, a personal home page and a larger topical Web site. The instructor introduced Web design approximately four weeks into the sixteen-week semester and spent roughly equal amounts of time on the print and Web assignments. The graduate creative writing course required students to create a single Web site containing a portfolio of work written for the class. Projects included a poetry site that used Flash animation to create dynamic poems, a script for a play, a novel adapted to the Web, and collections of nonfiction. The course focused on Web design and development throughout the semester. Students were introduced to basic coding techniques and design issues on the first day of class and, by the middle of the semester, had gained familiarity with HTML, cascading style sheets, and JavaScript. Full-class workshops of individual projects took place during the last seven weeks of the sixteen-week semester.

Students' Experience with the Web

Prior to beginning their work in the three courses, the six students had used the Web for personal and academic purposes. These purposes included using Web-based communication tools to chat and participate in discussion forums, using search sites such as Google and Yahoo!, conducting research for courses using Web-based library resources such as online catalogues and databases, and viewing documents for aesthetic purposes (e.g., reading fiction or poetry on the Web).

Three of the four undergraduates, Jessica, Reid, and Ellen, began using the Web as a communication and research tool while they were in junior or senior high school—roughly the mid-1990s. Kathy, in contrast, began using it in 2000, shortly before she began her undergraduate studies. Ellen pointed out that she "started using the Web in junior high school and was introduced to the Internet in a group format, which consisted of the entire class circling around a few computers in my school's computer lab." At roughly the same time, her family purchased a computer and obtained an America Online account. "My concept of the

Internet was really jaded after I started using AOL," she said. "I thought that the purpose of the Web was to 'chat' and meet people." Reid, who, like Jessica, used the Web largely for research until enrolling in his speech communication class, observed that he used the Web only casually until his senior year of high school, when he realized that the Web was "a lot bigger than I thought."

Like the undergraduate students, Callie noted that she had used the Web for informational purposes for several years. Since beginning her graduate studies, however, she noted that her use of the Web had grown. "I also go to the Web to read or look at art or experience a Web design," she said. "I guess I'm trying to say I see the Web as more of an artistic outlet now."

Only two of the students brought experience of developing Web sites to their classes. Kathy, the undergraduate student who had used the Web for the shortest amount of time—beginning in 2000—had worked for a year as a Web site editor using Microsoft FrontPage, a WYSIWYG Web editor. "Eventually the time necessary to maintain this site was no longer worth what they paid me, so after about a year, I quit," she said. "At the time I began [the class], I had only been using the Web to check e-mail or to surf around for information." Paul, a graduate student who had enrolled in the English department's master's program after three decades as a small-business owner, began using the Web as a business tool in 1997 to support just-in-time buying and eventually directed the development of a site for his company. "Around 1999 I had a site built for my own company," he said. "I used it as a marketing tool, sales catalogue, and all-purpose conduit for business-to-business communications." Paul noted that he made significant contributions to the overall content and design of his company's site, but he did not do any of the development or maintenance of its pages.

Individually, the six students brought different conceptions of the Web to their work in the three classes. Paul saw the Web largely through the lens of business, Callie considered it at least in part as a place for artistic expression, and the four undergraduates, to varying degrees, saw it as a communication and information-access tool. Although two of the students had experience developing Web pages, that experiencewas limited: neither had written text for the Web and neither had coded Web pages.

Students' Understanding of Web Documents as Genred

Even after completing their courses, the idea that documents published on the Web might be classified into discrete genres would likely come as

a surprise to the undergraduates who participated in this study. In their interviews, they refer to Web sites in a fairly monolithic sense. Even the two writing majors, who had more than a passing familiarity with the notion that print documents can be classified by genre, tended to refer to Web sites as an undifferentiated set of documents—as though one Web site might be much like another despite differences in site structure, design, navigation tools, purpose, and audience.

In part, this reflects a lack of emphasis on genre in the two under-graduate classes. Although Kathy and Ellen were required to write an essay that evaluated and reflected on a Web site, and were encouraged by their instructor to explore Web sites and share in their class discussion forum links to interesting sites, their instructor noted in an interview after the course ended that she felt some ambivalence about addressing the issue of genre during the course. "I don't think I addressed this type of writing specifically as its own genre," she said. Instead, she focused on the need to produce well-written Web sites: "I was asking the students to first think about their writing and second to think about how they could put their writing into a 'Web structure' —to turn it into that genre of writing we might now call Web writing. So, yes, I think Web writing does then become its own genre, for better or for worse depending on what assumptions and applications are at hand."

Similarly, the instructor of the speech communication course did not address the issue of genres. Nor did he require his students to explore and discuss among themselves other Web sites, a decision that may have also limited Jessica and Reid's awareness of genre differences among Web sites. "I should have," he said in an interview following the completion of the course. "And I have in the past. But I tried some new things [this semester] and deleting this component was a mistake."

In contrast to the students in the two undergraduate classes, the graduate students showed a more nuanced understanding of genre in Web documents. Callie, for example, discussed her interests in exploring creative and informative Web sites, suggesting an awareness of differ-ent document functions and genres on the Web. "I would say the whole writing experience was somewhat liberating," she said. "Creative hyper-text—hyperfiction, etc.—is still so new to the Web that I felt I could do whatever I wanted. The biggest challenge to me was to try to leave the linear structure associated with printed text." In part, Callie's awareness of genre emerges from class discussions that explored the implications of writing for the Web in genres normally composed for print media. The

ten students in the course, who had the freedom to write in any creative genre, produced short and long fiction, nonfiction essays and vignettes, poetry, and a play. Callie's awareness of genre, which is matched by Paul's, also reflects the more extensive experience as readers of print documents that they brought to the course.

Despite their comparative inexperience as writers, and despite the lack of focus on genre in their courses, the undergraduates articulated issues closely related to the idea of genre on the Web. Their focus in their interviews on site structure, navigation, ease of use, and general design features of Web sites suggests an emerging notion of features that should be present in effective sites, and to some extent this suggests an emerging notion of genres on the Web. Kathy's focus on sites that accomplished a purpose similar to the one she envisioned for her small-business Web site, for example, come closest to a sense of differing genres on the Web. "I spent lots of time looking at similar sites searching for the best way to organize mine," she said. "Also, I was concerned about the look of my site. Colors and the overall feel were important. I learned from other sites what I did not want, in addition to what I might try to emulate. If a site didn't do what I thought it should, I asked myself what I might do differently."

The other undergraduates expressed similar concerns about site structure, ease of use, and navigation issues. "For me, it's mostly navigation [that concerns me about Web sites]," said Jessica. "Design matters. But not being able to find something I want, especially when I know it's in there, is really frustrating." Reid expressed similar concerns about Web sites, noting that his recent searches for information about graduate programs had brought him to some "ridiculous" sites. "It really bothers me when I come to a site that's unfriendly—that you can't figure out," he said. "You don't know where you're going. You don't know what you're doing. It's totally illogical to me to be able to figure out what their strengths are academically, what they offer to students, things like that."

Had the undergraduate students been asked directly about differences among types of Web sites, such as search sites, portals, news and information sites, educational sites, commercial sites, and so on, it is likely that they would have been able to articulate general differences among them. That their discussions of their composing processes and experiences with the Web indicated little if any awareness of the Web as home to multiple genres suggests both a lack of attention to the issue in their classes and a general sense among the students of the Web as a monolithic, "genre-free" medium.

Student Writing Processes and Emerging Notions of Web Genres: The Impact of Print Genres on Student Conceptions of Web Sites

The writing processes of the six student writers reflect, to varying degrees, their understanding of the possible structures of Web documents, the need to provide navigation support for readers, the expanded range of illustrations that can be used in Web documents, and emerging conventions for page design. Along with interactivity, database integration, and communication tools, which were not addressed by the students in this study, these issues are likely to make strong contributions to emerging genres among Web documents. For the six students in this study, who had not been confronted by these issues in print-genre academic writing assignments, the need to consider them significantly complicated their composing processes. In many cases, faced with unfamiliar challenges, the students drew on their experiences as readers and writers of print genres to create their sites.

The Shape of Web Documents: Student Efforts to Create Appropriate Site Structures

The structures of the student Web sites varied in size and complexity. The two students in the speech communication course adopted a relatively straightforward interlinked structure consisting of six pages. The other students produced sites with combined structures that incorporated linear, interlinked, and hierarchical elements (see table 1).

With one exception, the sites exhibited the influence of print genres that students had worked with prior to taking the courses for which they created their Web sites. The two sites created by Jessica and Reid, the speech communication students, strongly resembled an academic essay, with an introduction (home page), three or four main points (related pages), and a works cited list (bibliography page). Ellen's site, a lengthy treatment of Emily Dickinson and her work, was organized in a linear structure that closely resembled—and was in many ways intended to be read as—an academic essay. And both graduate students, Callie and Paul, modeled their sites—in each case a collection of nonfiction essays and vignettes—on literary anthologies. Only one student, Kathy, created a site that had little resemblance to print genres, most likely because she was working on a type of site that has no print analogue—a commercial site for a small business (see figure 6).

In their interviews, the students indicated that their experiences as readers and writers of print genres had played a significant role in their

TABLE **1**
Structure and Page Lengths of Student Web Sites

Writer	Structure	Pages	Typical Page Length (screens)	Longest Page
Jessica	Interlinked	6	2	2
Reid	Interlinked	6	5	10
Ellen	Combined (strong linear influence with some hierarchy)	28	1 to 2	3
Kathy	Combined (strong interlinked influence with some hierarchy)	20	2	5
Callie	Combined (interlinked and linear elements)	32	1	4
Paul	Combined (interlinked and linear elements)	24	1	2

Figure 6: Site structure for Kathy's WhatchaThinking.com Web site (M = presence of side menu).
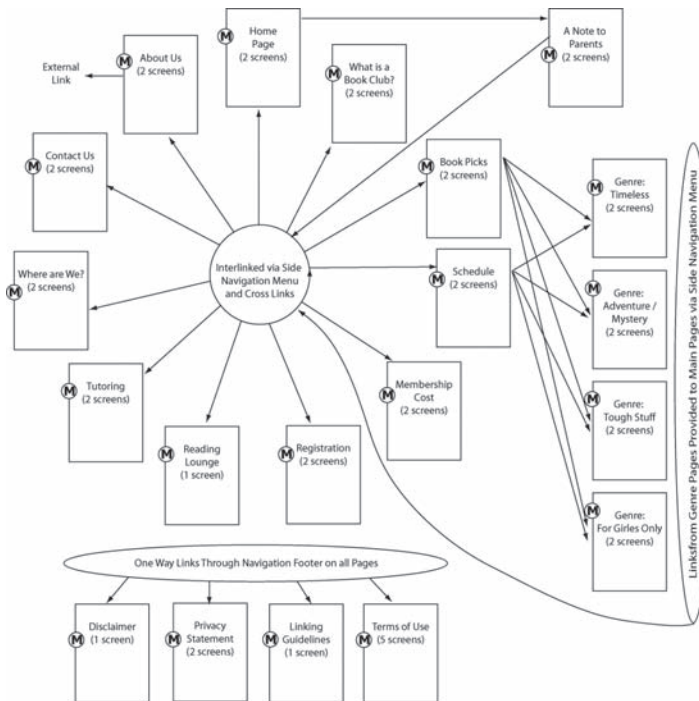
decisions about the structure of their sites. When asked why he had not considered breaking up his longest page, which required the reader to scroll ten times to view its complete content, Reid responded, "You know, it actually never crossed my mind." He suspected that he hadn't considered breaking up the page because his assignment had specified a minimum of five pages, including a home page, three content pages, and a bibliography page. "I think I had a very linear thought process instead of being Web page minded," he said. "In the future, I'd like to put it on another server and then I'll break it up into smaller pages."

Ellen, whose sites about the life and work of Emily Dickinson used a combined structure that had a strong linear component, had initially planned to create a site that echoed Dickinson's idea of "circumference, or the open-ended circular pattern that characterizes most of her poetry." Ellen adopted a linear structure, however, to address the demands of a complex site. "I had too much information and too many pages to keep it all ordered in my head," she observed. "I decided to go about building a linear structure first and then adding in a more circular dimension, but I ran out of time."

Callie and Paul created Web sites that served essentially as collections of their nonfiction essays. This required them to create a structure within which their essays could be housed and devise structures for the essays themselves. Both the overall structures of their Web sites and the structures they adopted for their essays were influenced by print genres. The overall sites were structured in a manner similar to a book-length collection of essays and to literary journals. Both sites used a cover—or opening page—that linked to a secondary page that linked to the essays. Callie used both an introduction and a table of contents, while Paul used only an introduction. The essays themselves were structured linearly, although both writers made an effort to chunk the essays into smaller sections and to link to related pages that functioned, particularly in Callie's case, as sidebars.

The challenges of adapting her writing to the Web affected Callie's project significantly. Initially, she had hoped to adapt a collection of nonfiction essays she had been working on for her MFA degree. She eventually chose, however, to create new essays that were more appropriate for reading on the Web. "As the essays stand, they are too verbose for an Internet read," she said. "So after some discussion with my professor, I was able to change gears and ultimately decided to create a 'parent' essay for the entire portfolio that would work well with a vignette setup—that

Navigation Tools on Student Web Sites

Writer	Menu	Footer	Header	Table of Contents	Next/Back Links	Text Links	Image Links
Jessica	X					X	X
Reid		X					
Ellen	X				X	X	X
Kathy	X	X				X	
Callie		X	X	X	X	X	X
Paul	X	X			X	X	X

is, several short stories that fit together but could be read independently of each other."

Helping Readers Move through Web Documents: Navigation Tools

The influence of students' experience as readers of Web sites was particularly evident in their choice and placement of navigation tools. The authors of the speech communication course Web sites, which were also the smallest and least complex sites, tended to rely on a single primary navigation tool. Ellen and Kathy used two primary tools each: menus and either a footer or a set of next/back links. Callie and Paul, the most experienced writers in the group, used the widest range of navigation tools. Callie was the only writer in the group to use a separate table of contents page, which showed the strong influence of print genres on the development of her site. A summary of the navigation tools used by the students is found in table 2.

In several cases, and in a manner similar to that through which writers learn print genres, the students noted that their decisions about which type or types of navigation tools to provide were influenced by their experiences navigating Web sites. Jessica created a navigation menu that appeared on the left side of each page on her site because she wanted to help readers move through her site easily. "That's my number one pet peeve," she said about navigating Web sites. "A good Web site has either a navigation bar or some sort of sequenced progression. Some sites lend themselves well to looking at this page first and this page second. So either that, a next and a back button, or some sort of navigation bar on the side or the top."

Like Jessica, Kathy included a side menu and links to the pages on her site. She also used a navigation footer (see figure 7). She based her decisions largely—but not completely—on her preferences as a reader of Web sites: "I used a side menu on my site as a primary navigation tool for

Figure 7: A side menu, footer, and links support navigation on the WhatchaThinkin? Web site.

one simple reason: I prefer this type of tool on sites I visit. I make a lot of purchases and obtain a lot of information from Web sites. I have always found a sidebar preferable to any other type [of navigation tool]. My only reason for including a footer navigation system is because I have talked to others who prefer this (weird people out there, let me tell ya)."

Callie and Paul, who were enrolled in the graduate Web writing workshop, considered two navigation issues not addressed by the undergraduate writers: whether a site should surprise readers and whether Web developers should use navigation tools to direct readers toward particular parts of the site. Callie, who used navigation headers and footers, reflected on her goal of surprising, but not bewildering, her readers: "I appreciate sites that intend the reader to get lost a little and experience something unique or nonlinear. But, ultimately, I want my readers to be able to get in *where* they want and get out *when* they want. I decided to put in both a "let me guide you" and "table of contents" path to give the reader those options. I also provided vignette links at the top of the page for all other

vignettes besides the one the reader is in. Then at the bottom of the page, I provided some general links (such as home, back, table of contents, etc.). Some of the pictures are linked and ultimately I would like all pictures to link to another page with some information on it."

Paul, who used a side menu, a footer, and links to support navigation, addressed the issue of constraining readers' navigation choices: "I had a little fun with the navigation in the sense that I organized the choices one had in exploring the site. There were certain pages where you could only go one way and other pages where you could go either one of two ways. I did that because I wanted to direct, to some extent, the reader's attention to stuff I put up. It might have been a little selfish, but if I went to the trouble of putting something somewhere, it's because I want the reader to see it."

More than Words Alone: Illustrations and Captions

Although all of the students used illustrations on their sites, their reasons for doing so varied. Reid, concerned that his history page, which includes a 2,400-word essay he had written for another course, would be intimidating to readers, used four photographs and two logos solely "to break up the text." Other writers used images to establish a relationship with their readers, provide information not available through the text on the pages, and support navigation to other pages on their sites. Ellen used scanned images of her own artwork to establish a mood that carried across her site (see figure 8), while Kathy selected images that carried a clear message about the importance of children becoming engaged readers. Kathy observed, "As long as [images] are not so big that they keep pages from pulling up quickly, I see them as a powerful way to implant ideas into the surfer's mind. In a sort of 'set the mood' kind of way, I believe they say a lot about you" (see figure 9).

Paul and Callie used images to establish a relationship with readers and to add information that would be difficult or impossible to convey through text alone. Paul's site used photographs and scanned images of paintings to display the landscape through which Lewis and Clark traveled and the handwritten journals kept by the two explorers. He also used line drawings to explain some of the complexities associated with bicycling (see figure 10). Callie used photographs of family members and settings in Kentucky to illustrate her essays (see figure 11).

In a clear departure from print conventions, the students largely avoided the use of captions. Reid explained that he did not use captions for
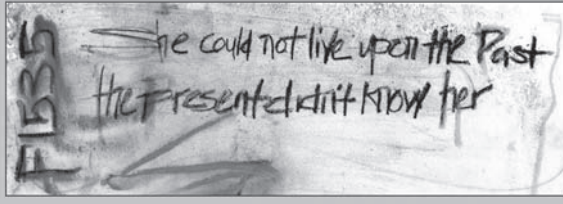
Figure 8: Ellen used images to establish a mood that carried across her site.

Figure 9: Kathy used images to stress the importance of children becoming involved readers.

Figure 10: Paul used images to convey information about complex concepts in his essay "Keeping Time."

Figure 11: The image in the margins serves as a link to a sidebar about "the real Sue Ellen."

the images on his history of contemporary Christian music page because he didn't want to add more text to a text-heavy page. Asked whether he might have used captions if he'd broken the page up into several linked pages, he said, "I don't know if captions are unnecessary for Web pages in general." He observed that ALT tags—labels that appear when an image cannot be viewed or when a mouse hovers over it—served a function similar to captions and that he'd grown to expect writers to use them: "As far as the ALT tags go, if you really want to see what's there you can. And the funny thing about that is that I've been to Web sites since that don't have the ALT tag and it drives me nuts."

Reid's and Jessica's use of ALT tags reflect a requirement to do so by their instructor. In their interviews, they indicated that they were unaware of the TITLE tag, which is intended to serve a function similar to a caption (in contrast to the ALT tag, which is intended as a brief label for the image). The students in the undergraduate and graduate writing courses had been made aware of this distinction. Ellen and Kathy chose to use neither ALT nor TITLE tags, while Callie and Paul used both. Paul was the only writer in the group to use captions on his site. Although he tended to use the TITLE tag with the majority of his images, he also used captions for the images in his essay "Keeping Time," which displayed four line drawings that illustrated epicycloidal curves (see figure 10 above).

Approaching the Reader: Page Design

The students involved in the three classes discussed in this chapter found varying degrees of guidance regarding page design, in the sense of being able to consider established genre conventions. Jessica, Reid, and Ellen, who created sites that essentially served as academic essays, found themselves faced with a wide range of design choices—and differences in the design of their respective sites reflect that range. Kathy, who developed a Web site for her small business, used the designs of sites that offered similar services to guide her decisions. Callie and Paul adopted designs heavily influenced by two print genres—essay collections and literary magazines.

The most striking differences in design among the student sites are found on the home pages (see figures 12–17). The home pages of Jessica's propaganda site, Reid's contemporary Christian music site, and Kathy's WhatchaThinkin? site have the same layout of other pages on their respective sites. Jessica uses a title and side menu to frame the main content of the site. Paul uses a title and footer as part of a sandwich in
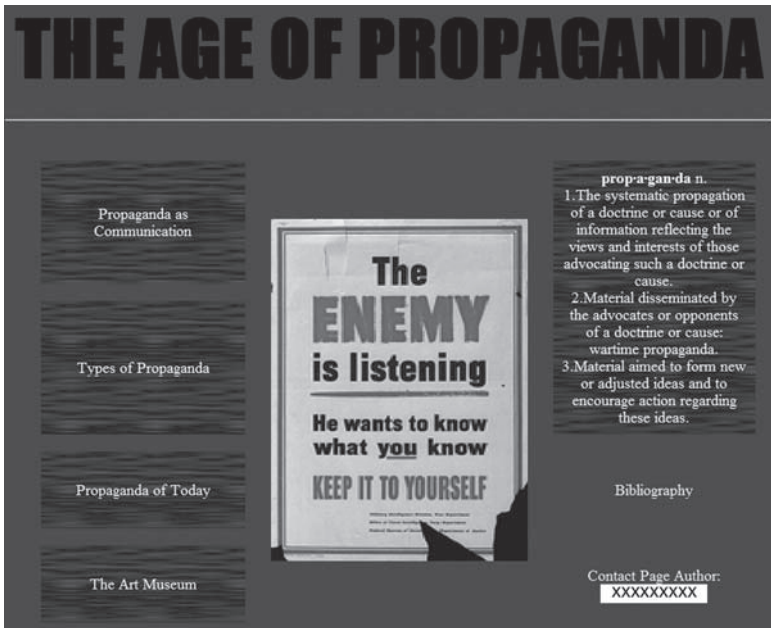
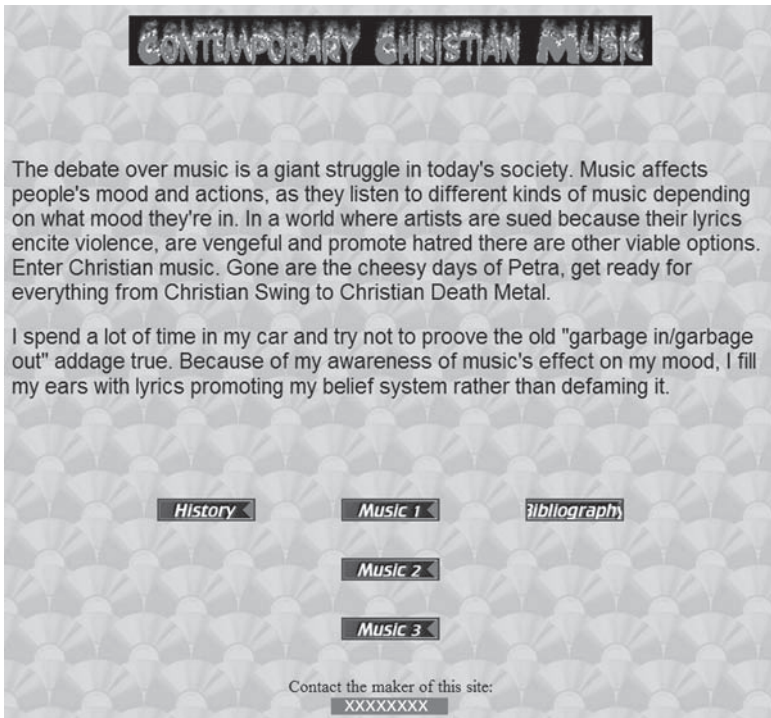Figure 12: The home page of Jessica's propaganda site.

Figure 13: The home page of Reid's contemporary Christian music site.
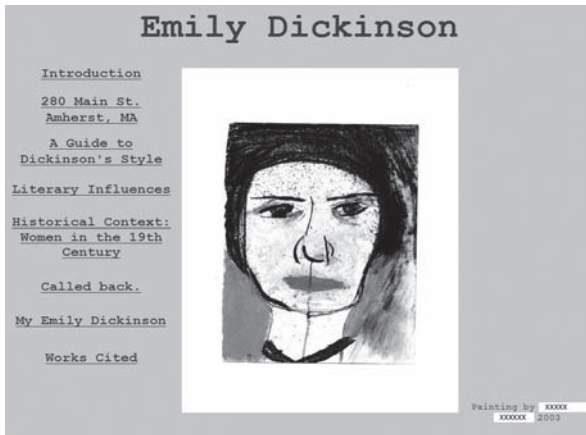
Figure 14: The home page of Ellen's Emily Dickinson site

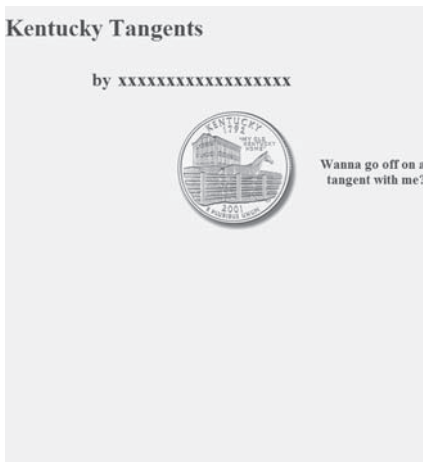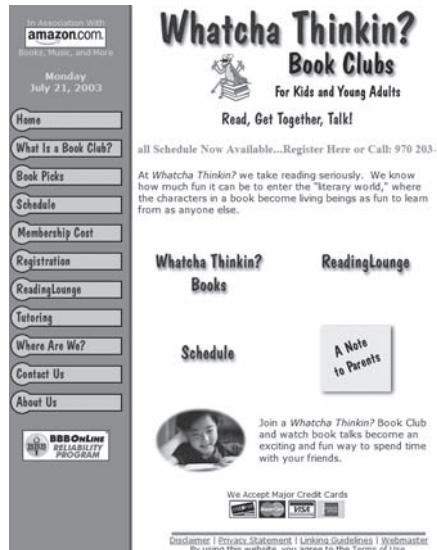Figure 15: The home page of Kathy's WhatchaThinkin? site.

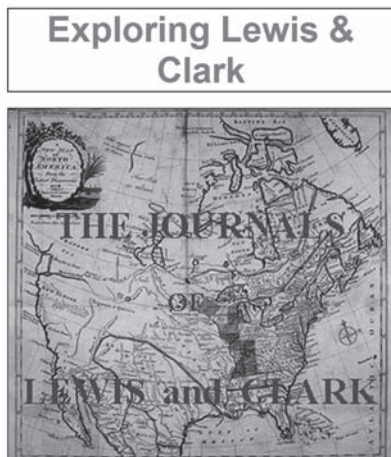Figure 16: The home page of Callie's Kentucky Tangents site.

Figure 17: The home page of Paul's Exploring Lewis and Clark site.

which body text serves as the filling. Kathy uses a title, side menu, and footer to frame the content on her site. Ellen's Emily Dickinson site home page serves largely as a table of contents for the site. The title and a set of links formatted in a manner similar to the side menu used on other pages in the site frame an image Ellen created for the site. Callie and Paul's home pages function in a manner similar to the cover of a book. Readers can enter the site only after clicking on the main image on the home page. The linked images bring readers to introductions on the two sites.

Pages within the students' sites reflected a variety of design philosophies and interests. Ellen, who created many of the images used on her site, noted that she "spent a lot of time on page design because it was my first time working with visual materials and I really enjoyed being able to use color and pictures in coordination with text." Paul, in contrast, indicated that the design of his site "was kept purposely simple." He created a template for his pages and used a linked cascading style sheet to establish "a sense of unity" on the site—"and also to keep from biting off more than I could chew."

The ability to experiment with design was of interest to all of the writers in the study. Kathy explained that decisions about page design were critical elements in her composing process. "Web sites must take appearances seriously," she observed. "Competing with thousands of other sites that may offer similar information, the appearance of the words on the page became a huge factor."

CONCLUSIONS

As the six students wrote for the Web, they found themselves addressing four issues that they had not had to deal with in significant depth—and in some cases not at all—while composing the standard academic essays they had written for other courses: document structure (or shape), navigation tools, illustrations, and page design. As they addressed these issues, they reflected on their experiences reading (and in two cases developing sites for) the Web, located and analyzed Web sites similar to those they were creating, sought guidance from their instructors, and drew on their experiences as readers and writers of print genres.

Faced with a medium in which genres are very much in a process of emergence, without the historically established conventions of print genres, the students turned to other Web sites for ideas about site structure, navigation, and design. Most of them also borrowed heavily from other Web sites, obtaining HTML code, cascading style sheet definitions, scripts of various kinds, and illustrations such as photos and artwork that were relevant to their topics. They also borrowed from print genres. Ellen's Web site about Emily Dickinson, for example, was structured in a manner similar to a longer academic essay, while Callie and Paul's collections of nonfiction essays and vignettes echoed the genre conventions of book-length collection of essays and literary journals. Similarly, echoing the page-turning function of print documents, Ellen, Callie, and Paul each used next-page and previous-page links in their sites. Callie went even further, using a table of contents—a navigation tool familiar to readers through its frequent use in print genres—to help readers find their way through her site.

In some ways, the comparative lack of genre conventions for Web documents simplified the writers' task. Because there is more latitude to structure and design a site, and because a wide range of digital illustrations can be used on the Web, the six writers felt more freedom to experiment with their sites. Callie's observation that she found the idea of working on the Web "liberating" was echoed by other students. The idea that the conventions associated with print genres might be left behind without being replaced by analogous conventions for Web documents—even as many of them drew on print-genre conventions—seemed to foster a sense of experimentation and innovation among the students.

At the same time, that comparative lack of genre conventions worked against the students, complicating their ideas and forcing them to

reinvent solutions that have been found by other writers. All of the students struggled to some extent with decisions about how to structure their sites and design individual pages. And, unlike writers of print documents, where navigation decisions are often limited to the use of footnotes, endnotes, or marginal glosses, all of them spent a significant amount of time thinking about the relative merits of menus, headers, footers, and previous/next buttons.

For writing instructors, these issues raise a number of concerns. When asked in an interview about the extent to which she had encouraged her students to think about writing for the Web as a process that differed from writing for print genres, the instructor of the intermediate Web development class explained that she had taken care to encourage them to think about writing first and design issues second, even though this meant that their sites might not be as technically proficient or as well designed as they might be had they focused primarily on coding and design. "I encouraged them to take their writing seriously and *then* take that into their Web design," she said. "But they definitely had to think about that writing in a way different than they had for any class before."

Debates about the merits of focusing on coding first and writing second or vice versa have their analogues in discussions of visual rhetoric and document design. It is likely that instructors of writing courses who assign creating Web sites might profit from examining those discussions. It is also likely that such instructors can benefit from considering the literature, including the essays in this collection, about genre and writing instruction. If instructors inform their assignments with an understanding of the Web as a home to multiple genres, those assignments are more likely to attend to issues concerning organizational structure, page design, navigational tools, and the use of digital illustrations. Clearly, we are far from arriving at a consensus about the conventions associated with Web genres—or, for that matter, about precisely which Web genres have emerged. However, if instructors emphasize the emergent nature of genres on the Web, student writers are more likely to appreciate the range of choices they can make as they compose Web documents.