Writing and reading in hypertext environments have more similarities with incompetent student research writing than the model of research writing that dominates the freshman composition enterprise. The research paper becomes a rite of passage and capstone writing experience, taxing the student writer's skills of organization and deft manipulation of multiple sources. Over the years, composition teachers have tried numerous techniques for helping students perform well as writers by calling research papers by a different name, by emphasizing rhetorical inquiry, or by introducing elements of personal narrative. There are reports of success, but most research papers continue to be "grotesque monstrosities." The authoritative voice of the writer of a research paper has already been challenged by such technologies as photocopying, word processing, electronic scanning, and computerized databases. Reading and writing in hypertext in the future will decentralize the writer further. Although its immediacy and flexibility suggest orality, electronic text moves away from logocentrism. Research writing in electronic text, whatever its eventual form, will not be the monumental, unified, and authoritative research paper that represents the last throes of print technology. (RS)
I am going to try to do three things—briefly: (1) describe the presumed virtues of the library research paper as a standard assignment in freshman composition courses; (2) describe the kind of paper students submit when they fulfill such assignments honestly but incompetently; and (3) describe the kind of electronic writing and reading in hypertext all of us may be doing in the future. In offering these descriptions I hope to show that writing and reading in hypertext environments has more similarities with incompetent student research writing than the model of research writing that dominates the current freshman composition enterprise. This is not to defend incompetence or to adopt a curmudgeonly attitude toward technological change but merely to help situate the standard research paper assignment now and in the near future.

So, to my first aim—to describe those virtues of the research paper that keep it so firmly entrenched in the curriculum. And entrenched it is, despite good reasons for abandoning it altogether. It takes up an inordinate amount of time, especially in proportion to the quality of writing students produce in
fulfilling this requirement. Its challenges have encouraged dishonesty and spawned an industry in recycled papers. The topics tend to be phony imitations of academic models, lacking sufficient real-world rhetorical frameworks to make them valid writing experiences. When there are good rhetorical frameworks, they probably belong to clearly defined disciplines beyond the scope of freshman composition. Or, when the frameworks are more valid—as, for example, in investigative reporting—the focus becomes less academic and more journalistic. Given the specialized discourses and methodologies of contemporary intellectual domains, there are potent arguments in favor of reserving research writing for discipline-specific courses and getting teachers of freshman composition out of the business of supervising 30 or 60 or 90 research papers each semester.

Nevertheless, even these arguments against the research paper recognize its value, and I suppose one reason we cling to it is to reaffirm the centrality of our mission in the academy. We are the ones who guide students through the complex systems of information storage and retrieval that fragment our world. We are the ones who introduce them to the way knowledge is organized against the diversity and chaos of that world. We are the ones who promote democratic access to and good use of information within those systems, thereby protecting the repositories of knowledge from misuse and perversion. The research paper thus becomes a rite of passage and capstone writing experience, taxing the student writer's skills to the point where any deficiencies will become painfully apparent.

Writing a research paper taxes two skills in particular. The first of these is organization. Although organization—what to say first, what to say next—is the premier problem in all writing, the size and complexity of the research paper puts organizing skill to a particularly rugged test. We expect the writer
to honor the way knowledge is organized in the library but to organize the paper in a way uniquely fashioned to the current rhetorical task. It should not look like bits and pieces of information cut and pasted together. Even though it is highly structured, we expect the organizational pattern to guide the reader without too many of its structural elements showing. There needs to be definition and background—but not too much. The organization, in short, reflects a thoughtfully constructed hierarchy involving thesis, support, fact, opinion, argument, refutation, criticism, and defense. Departures from the plan are easy to spot and label as serious violations of the conventions of research writing.

The other skill revered in research writing is deft manipulation of multiple sources. The student needs to be able to not only find sources but incorporate them into the paper without losing control. Every source introduced into the paper is another voice competing with that of the writer, who must weave sources, references, and citations into his or her own text while at the same time maintaining a single authoritative voice. The writer needs to be a shrewd stage manager, allowing these other voices a moment in the spotlight, but getting them off stage before there's an encore or ovation. It's a formidable task: to demonstrate the use of multiple sources while speaking with a single authorial voice.

These features of tight organization and shrewd manipulation of sources are among the honored achievements of print technology. These are the conventions imposed by the literate public transacting the public's business in print.

Over the years we have tried numerous techniques for helping students perform well as writers at the upper end of this literate public by calling the research paper by a different name, by emphasizing rhetorical inquiry, by
introducing elements of personal narrative, by focusing on the process of discovery, and by guiding that process with warmth and humanity. There are reports of great successes, to be sure, but my own sober conclusion is that most research papers continue to be grotesque monstrosities. Perhaps having been required in the past to come up with twenty sources and elaborate outlines, students bring to these projects preconceived notions of high formality that survives most of our efforts to make the research paper less formal and more rhetorical. They misapprehend the conventions, seeing the formalities without the more subtle elements of voice and order that separate college research papers from technical reports. So we get papers that look like ransom notes made out of newspaper and magazine clippings cut and pasted together.

A colleague who teaches history at a community college has given me a sample research paper from an American history class. He knew there was something wrong with it but wasn’t sure how to explain and account for its defects. He had asked students to formulate a question that could be answered by exploring some area of American history. This student wondered why among assassinated presidents Lincoln and Kennedy are remembered and McKinley is not. A reasonably good question. But what happens? In attempting to pursue this inquiry in the library, the student does not need a question; he needs a topic. Not even a computerized database takes questions. It recognizes authors, titles, topics, and keywords and identifies a place in the database where the corresponding information is stored. The student assumes that finding the place and its informational contents provides the answer to the question. In this case, the student's topic/place is something like "the life and presidency of McKinley." The resulting paper is a cut-and-paste summary of that presidency in which the original question about McKinley's having been forgotten by popular history serves as a framing device but is not really
answered. In any case, a good answer to that question would probably not take the form of topical information. The student's work is honest, earnest, but flawed in allowing the sources too much voice. And the flaw illustrates the tremendous inertia of topicality in the whole research paper enterprise, an inertia reflecting the way information is organized and used in what may well be the waning decades of the era of print technology. The writer of the research paper must lead the way through the mass of information by defining the parameters and subdivisions of the topic, making transitions, and achieving closure and completeness within a fixed frame of reference. The paper must speak in a single voice that supports the generic and textual unity of the written product.

The authoritative voice of the writer of a research paper has already been challenged by such technologies as photocopying, word processing, electronic scanning, and computerized databases. These technologies make it easier for a source to speak with its own voice and to be incorporated wholesale into a text. Photocopying has greatly reduced the need for, and even the usefulness of, note-taking. One way to keep a source under control is to reduce it to notes, preferably brief enough to fit on an index card. By having such notes and arranging them on a large floor space, the writer of the research paper solves the two big problems of organizing and managing sources. These days, however, the writer is more likely to use photocopies annotated with yellow highlighting. Working this way is clearly a step away from maintaining authorial control. The flexible and protean text space in word processing invites large scale accumulation of undigested material, and electronic scanners enable the writer to transport material without even reading it. The new integrated databases for periodical indexes enable a writer at a home computer to locate sources and get printed abstracts from a broad
range of intellectual domains. These abstracts can then be pasted into a word processed text file, and with a little editing and some introductory and concluding material, the student can produce a complete paper in about an hour—and it would not be worse than the cut-and-paste papers we know so well. And I am not convinced that the student who produces this one hour paper has learned much less about the research process than his or her colleague who goes through all the laborious and time-consuming steps. In any case, these new technologies have moved the author away from the center and toward the margins.

Reading and writing in hypertext in the future will no doubt decentralize the writer further. My principal source for these forthcoming remarks about hypertext is Writing Space: The Computer, Hypertext, and the History of Writing (Hillsdale, NJ: Lawrence Earlbaum, 1991) by Jay David Bolter, certainly the most interesting book I have read this year. In contrast to printed text, electronic text is many-voiced. It is thus self-contradictory, more flexible, less monumental. It replaces the page with a fluid network of verbal and highly abstract elements. It invites reader participation, thus blurring the roles that are always so clear in printed text. Electronic text is under less obligation to be unified. There is no need to pull the reader along, so the experience of participating as a reader is fragmentary rather than unified. Electronic text is also less stable. Instead it is malleable and animated.

Bolter points out that the Table of Contents and the Index that typically frame a book represent two ways of accessing knowledge. The table of contents represents the book according to a topical organization of headings and sub-headings. It discloses the linear organization of the material and invites the reader to accept that organization by starting at the beginning, or if not there, at least by taking the pages in order. The index, however, represents
the contents by association, transforming the hierarchical tree of the table of contents into a network. As such, the index is rather more like an electronic text that can be accessed in countless different ways. It invites us to read the book following the pages references provided for individual items in the index. That is the way electronic text would be read, so that even a small one would be read in many different ways by different readers. Pursuing research in this manner will be quite a different kind of experience. But it might have helped the author of the McKinley paper. He conducted his research topically. Doing it by association might have taken him away from biographical details and toward matters of opinion formation, popular culture, and the writing of history. Such excursions by association might have helped him get closer to answering his original question.

Electronic text also challenges current notions of the ownership of writing. Even as I was preparing this paper, my department has been hotly engaged in cracking down on plagiarism. In the context of my recent reading about hypertext, the whole discussion plagiarism seemed antiquated. The rules for using and acknowledging the writing of others are the ultimate refinement of print technology. We are constantly using the work of others, and it takes a long time to learn how to cover our tracks and sanitize our larceny with quotation marks and footnotes and by imposing our own voice on what we have pilfered.

Although its immediacy and flexibility suggests orality, electronic text moves away from logocentrism. Sources become voiceless and take on a greater sense of being arbitrary, mediated, and artificial, making it easier to adopt language without feeling a person’s rights are being violated. Furthermore, much electronic text will be voiceless because it will be expressed in symbolic and graphic form.
Research writing in electronic text might take the form of tracing a pathway through a network of information. It would involve the reader in dialogue and making choices. It would attempt to structure knowledge without stabilizing it within a single topical viewpoint. It might even consist of constructing a specialized network, a gathering of information without creating a particular design for it. But whatever it is, it will not be the monumental, unified, and authoritative research paper that represents the last throes of print technology. A well-made research paper of that sort is indeed a fine thing, but I will not miss it.