

## THE UNDERGRADUATE RESEARCH PAPER AND ELECTRONIC RESOURCES: A CAUTIONARY TALE

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Collecting information to describe, to analyze, and ultimately to reach a conclusion about human development is what historians do. One of the most important ways students learn this process is the research paper. It is true that the growth of the World Wide Web and the availability of other electronic resources have made research easier for many students and certainly have made primary materials more accessible than ever before. But have such modern technical advances actually rendered the educational process easier and less time consuming? Or does the very power of the technology not only create new problems but also exacerbate old ones?

There is a great deal of "magical" thinking about the effect of electronic resources on education. President Bill Clinton has called for access to the Internet in every American classroom, to the cheers of "technocrats" and many educators. Microsoft advertises its net browsing software and "interactive" CD-ROM reference materials by showing students completing their homework with the click of a mouse button. All this "hype" is a celebration of form over substance. Such thinking commonly "equate[s] information with knowledge, and research with information or diffusion of information."<sup>1</sup>

Unfortunately, demagoguery and overstatement from educators and politicians have led students--and some teachers--to believe that using the computer will make their work dramatically easier while improving quality. On my campus "technology infusion" in instruction has become a required category in faculty evaluation, and there is much emphasis on the importance of using electronic resources in teaching--without the presentation of any evidence that such methods are inherently superior to others. Colleagues from other fields are eager to explain how much history can be found on the Net and sometimes seem puzzled why the institution even bothers to offer courses in such an easily accessible area.

The Internet does offer access to many resources, ranging from journal articles that are not available in the university library to primary sources that used to require a visit to an archive to find. A good example of such material is U.S. Census data<sup>2</sup> that have become available to virtually any student on any campus. The need for the Adobe Acrobat Reader in addition to a good browser to access some parts of the site

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<sup>1</sup>Mario Bunge, "A Humanist's Doubts about the Information Revolution," *Free Inquiry*, 17 (Spring 1977), 26.

<sup>2</sup><http://www.census.gov> (April 18, 1998). The date shown in parenthesis at the end of Web references indicates the last time the author accessed the site shown.



makes it a bit inconvenient, but the availability of demographic data broken down, in many cases, to the county level is certainly useful. The National Archives and Records Administration<sup>3</sup> has some 35,760 items on line, in addition to finding aids for much of its collection, although at present the latter help only in preparing for a visit to the archives. A valuable assessment of American history resources on the Web can be found in a recent article in the *Journal of American History*.<sup>4</sup>

The opportunity to research such materials is clearly valuable, but all the click of a mouse button achieves by itself is plagiarism. With very limited computer skills, a student can download and insert blocks of text directly into his or her composition. The material need not even be retyped to be turned in; the word processor will make the format consistent for printing. Worse, whole papers can be downloaded from the Internet for a small fee.<sup>5</sup> The possibility of buying a paper is, of course, not new, but the convenience of doing so via the Net is much greater than with past methods. The Net also makes it particularly easy for purveyors to gather papers from a variety of sources into a pool from which students literally all over the world can draw. An essay might be resold many times without much danger of its being submitted to the same instructor twice. Multiple use creates volume sales and keeps the price down. In addition to such commercial sources, the World Wide Web, now estimated to comprise more than 320 million pages,<sup>6</sup> is filled with essays concerning an enormous number of subjects. It is, as one critic says, "a worldwide vanity press."<sup>7</sup>

The vast amount of material makes it more important than ever for a professor to follow student work in detail. Without this increased oversight, the result is likely to be more acceptance of plagiarized papers or a reduction in the amount of research-based writing. The variety of material available is so great that the hints of style and format that in the past might have suggested copied material are less likely to appear. Checking a student's footnotes is quite difficult. To be dependable, it must be done using the same search parameters with the same search engine. Even that is no guarantee. The Web is constantly shifting and growing, and search engines are not very efficient. The very best, HotBot, covers only a little more than one-half of the

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<sup>3</sup><http://www.nara.gov> (May 1, 1998).

<sup>4</sup>Michael O'Malley and Roy Rosenzweig, "Brave New World or Blind Alley? American History on the World Wide Web," *Journal of American History*, 84 (June 1997), 132-155.

<sup>5</sup>See <http://schoolsucks.com> (May 1, 1998) as an example of sites developed to providing papers for fees. They also provide crude endorsements of and encouragement for cheating.

<sup>6</sup>Steve Lawrence and C. Lee Giles, "Searching the World Wide Web," *Science*, 280 (April 3, 1998), 100.

<sup>7</sup>Todd Oppenheimer, "The Computer Delusion," *The Atlantic Monthly*, 280 (July 1997), 61.



Web, and the worst tested, Lycos, only 4.41%.<sup>8</sup> Since the engines use different methods of searching, results from one to another might be different even when seeking the same topic. Thus, cited material might be gone from the Web, missed by the search engine, or found only after a merry chase through hundreds of sites. Some instructors require submission of printed copies of all Web sources cited, but doing so certainly makes use of the Web more cumbersome than it should be or than traditional library sources.

Cheating is only one pedagogical problem that is worsened by electronic sources. Especially for students in their first years of college who are really trying to do honest research, the Internet often means more work than old-fashioned methods. One of the fallacious claims for electronic resources is that they provide vitally important new information. I have been involved as a student and professor in higher education for more than thirty years, and it has not been my experience that research by undergraduate history students--especially in the first two years of matriculation--has been seriously impeded by a lack of information.<sup>9</sup> Majors in upper-division courses at small colleges sometimes do lack primary materials that the Net can provide.<sup>10</sup> The Net also makes available various databases of articles, such as the University System of Georgia's GALILEO,<sup>11</sup> and with increasing frequency these provide full text of the items listed. This is, of course, only an accelerated interlibrary loan service and new only in convenience.

The rest of the flood of information on the Net is more problematical, for both student and professor. As humorist Dave Barry once said "all the information on the information superhighway was put there by people, and so most of it is wrong." Perhaps not most of it, but how is a student who starts with relatively little knowledge

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<sup>8</sup>Lawrence and Giles, 98.

<sup>9</sup>For a discussion of the impact of the current flood of information and the role of schools in managing it, see Neil Postman, "Technology: The Broken Defenses," in *Technology and the Future*, 7th ed., ed. by Albert H. Teich (New York, 1977), 28, *passim*.

<sup>10</sup>High school teachers with whom I discussed the use of the Internet at the 1997 Georgia Council of Teachers of English convention were often enthusiastic about the materials they had found on it, especially those in rural and/or poor districts, where traditional resources were limited. But every one reported spending what seemed to me inordinate amounts of time on monitoring students to prevent access to salacious sites being obtained. No one had any thoughts about why it might not be easier to print out material from good Web sites and use it in that form.

<sup>11</sup>GALILEO is a suite of applications which includes the databases accessing the various electronic indexes to newspapers, periodicals, and journals (Periodical Abstracts, MLA, *Contemporary Authors*, et al.); various 'hot links' under the 'Internet Resources' button; and access to the WWW via any of several search engines." Description provided by Jerry Brown, Reference Librarian, Hunt Memorial Library, Fort Valley State University.



supposed to judge? Critical discrimination among sources requires significant knowledge of the subject and a level of sophistication to be expected from an advanced student, not a beginner. Furthermore, the nature of the Web makes such discrimination significantly more difficult than in a library.<sup>12</sup>

In learning to evaluate sources, students traditionally had a number of supports. Any book bought for the university library was thought by an author, an editor, and an acquisition librarian, at least, to have some value. The tests for scholarly journal articles have generally been even more stringent. Journalistic sources are less dependable, but those in university libraries, by and large, have been done by professionals. In the library, student decisions about what to use as sources have been based on such considerations as the degree of primary information, effectiveness of argument, and accuracy as determined by comparison with other sources. Information on the Net, however, is subject to no refereeing or editing and might be--often is<sup>13</sup>--deliberately intended to mislead. Whereas a university press might be presumed trustworthy, a university Web site might have material so controversial and incorrect that separate disclaimers have to be posted.<sup>14</sup> Most historians would regard it as foolish to take a first-year student to the National Archives, get him or her permission to use documents, and then leave him or her to do research. And that would be foolishness that had librarians and archivists to direct it, using documents chosen for their historical value. In other words, even if the Net were simply an extension of the library, the student would be faced with many additional hours of reading, and the professor with the necessity of much more time-consuming supervision over the basic

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<sup>12</sup>Librarians are beginning to recognize this problem and to suggest solutions. See Marsha Tate and Jan Alexander, "Teaching Critical Evaluation Skills for World Wide Web Resources," *Computers in Libraries* (Nov.-Dec. 1996), 49-55. For additional comment see also Oppenheimer, 61.

<sup>13</sup>According to a Knight-Ridder syndicate investigation, the Ku Klux Klan maintains over 200 sites at present. *The Macon Telegraph*, March 15, 1997. The number concerned with paranormal phenomena, mostly treating completely unconfirmed events, powers, and entities as scientific fact, is also huge. A recent survey limited entirely to Yahoo identified more than 1000. See Clifford A. Pickover, "Paranormal Web Sites Proliferate," *Skeptical Inquirer*, 22 (May-June 1998), 12. See also Oppenheimer, 61.

<sup>14</sup>The reference is, of course, to Northwestern University and the page of Arthur Butz: <http://pubweb.acns.nwu.edu/~abuta/> (April 17, 1998). Butz supports the idea that the Nazis did not conduct a Holocaust during World War II. Northwestern's disclaimers (see <http://www.nwu.edu/president/news/970107-Butz.html> [April 17, 1998]) appropriately defend freedom of expression, but are separate items. Butz's page provides reference to his book *The Hoax of the Twentieth Century* (Torrence, CA, 1976), and the *Journal of Historical Review*, published by the Institute for Historical Review, which is devoted to denying the Holocaust.



collection of information.<sup>15</sup> One might argue, along with John Stuart Mill, that exposure to false ideas is a good--perhaps the best--way to refine one's own thinking, but in practice such an argument is unrealistic in dealing with freshmen and sophomores, who are mostly being taught a one-term survey course.

The nature of the medium, furthermore, makes the Web much more difficult to use than a library annex, and so creates even more problems for students and their teachers. Every bit of information is immediate, and there is no apparent distinction. A student might be reading an article in the *American Historical Review* and in a click or two of a button be presented with completely unsubstantiated, perhaps deliberately falsified, information about the same subject.<sup>16</sup> The student's potential confusion is also worsened by his experience of the medium. He is seeing what is, in effect, a television, a source he has depended on for information for most of his life.<sup>17</sup> Today's students might also have been influenced by Channel One<sup>18</sup> in public school and almost certainly have seen videotapes in class that were treated with the same respect as books. He or she might even have had one of the new "distance learning" courses presented entirely by television. Suddenly the previously trusted television is--sometimes--a liar.

The confusion about the virtue of Internet sources is also worsened by what seems to me a growing confusion between virtual reality and reality.<sup>19</sup> Even the emerging

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<sup>15</sup>S.J. Marcus, "Ask the Librarian: Finding Research Quality Information on the Web," *Technology Review*, 99 (Nov.-Dec. 1996), 5. See Also O'Malley and Rosenzweig, 138.

<sup>16</sup>Gertrude Himmelfarb, "A Neo-Luddite Reflects on the Internet," *Chronicle of Higher Education* (Nov. 1, 1996), A56. As a practical example, see Robert A. Peterson, "A Tale of Two Revolutions," *The Freeman*, Online--<http://www.self-gov.org/freeman/8908pete.htm> (May 27, 1997), and James J. Drummey, "Their Sacred Honor," *The New American* (June 24, 1996), Online--<http://www.jbs.org/sacrdnr.htm> (May 27, 1997) for two quite different and opinionated depictions of the American revolution; one from the John Birch Society, presented very much as scholarly journal articles. Although one might not have expected freshmen in the past to stumble on such items, one of my students reported they were quickly on his screen as he used hyperlinks to pursue material on revolutions. A senior, he recognized that this material, while useful, was not necessarily the production of objective scholars.

<sup>17</sup>This subject is discussed by B. Keith Murphy, "The Men in Black: The Use of Narrative to Establish Victimage in Conspiracy Theory," *The Proceedings of the Fifth International Conference on Narrative* (1996), ed. by Joachim Knuf (in press).

<sup>18</sup>Mark Crispin Miller, "How To Be Stupid: The Lessons of Channel One," *Extra!*, 10 (May-June 1997), 18-23.

<sup>19</sup>Clifford Stoll, *Silicon Snake Oil: Second Thoughts on the Information Highway* (New York, 1995). Stoll has been involved with the Net since the original ARPANET. His amusing but often very thoughtful book should be on the reading list of everyone seriously excited about the new world being created by computer technology.



vocabulary for describing the Internet reflects this problem. A collection of information and images (what a troglodyte like me calls a book) is a Web site. Site? Isn't a site a real place? Computer enthusiasts speak of visiting both actual and Web sites, however. Would anyone equate visiting the Web site devoted to the battle of the Somme<sup>20</sup> with walking over the site of the battle in France? Regrettably, such equation seems to happen. In a lecture to the Fort Valley State University faculty, Donald Farmer, an historian of ideas from King's College in Pennsylvania, described a project using the World Wide Web that he assigned to his class in Japanese culture.<sup>21</sup> Via the Web, the students were able to "stroll" through a number of Japanese gardens and then write about the aesthetics represented in them. Surely, Professor Farmer does not equate sitting at a computer in a dormitory amidst the fragrances of unwashed laundry, leftover pizza, and stale beer, or even in a harshly lit, institutionally decorated library, and looking at pictures with physically being in a Japanese garden. Even granting some virtues to being able to make choices about what to look at (which a film does not offer) and about movement (which a book does not offer), all that has really happened is that the student looked at pictures of Japanese gardens and read or heard a narrative. If the garden assignment is presented to students with no allusion to the limitations of the experience, it will certainly add to their confusion about the value of material drawn from the Internet. Once again, the pedagogical reality is that a beginning student--more often than not an advanced student also--will require more help than ever before from mentors if he or she is to cope effectively with research. Even with that help, he or she will spend more--not the often proclaimed less--time on his or her project. My argument here is not that the "virtual" experience is unhelpful, but that it is not what it is portrayed to be. A substantive secondary source is better than a superficial one, but being better does not convert it into a primary source. Such miraculous conversion is exactly what is being claimed by suggesting that virtual reality is real.<sup>22</sup>

There is yet another problem for history students in the use of Internet sources. Efforts to cope with the vast number of sources available can result in a damaging

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<sup>20</sup><http://www.somme.com/> (May 1, 1998).

<sup>21</sup>Donald W. Farmer, Consultant, Fort Valley State University Faculty Workshop on Assessment, January 24-25, 1997.

<sup>22</sup>For an example of treating the virtual as real see *Parade Magazine* (Aug. 7, 1997), 7. In suggesting good sites for children the editors comment that at <http://www.whitehouse.gov/WH/kids/html/home.html> (May 1, 1998) "... kids can tour the President's home" and at <http://www.dinosociety.org/homepage.html> (May 1, 1998) they can have "visits to dinosaur digs." While in themselves these might be trivial examples, imprecision in language has always been one of the greatest banes of education. How much worse is it if the imprecise language represents confusion about what is real? Educators cannot control the popular media, but they should not fall into the same sloppiness and error.



narrowness of focus. An undergraduate's paper is more likely to lack context than specific facts about a topic. For example, an extraordinary knowledge of the trials and tribulations of the Lewis and Clark expedition is worth much more if the journey is set into the context of the Louisiana Purchase. But accumulating general knowledge is time-consuming, and its value is not obvious to students. The nature of computer search software, unfortunately, promotes narrow research, removing the need to read the chapter in which a subject is discussed. A "find" command will take one right to the particular information sought. Often hyperlinks will allow a jump to more very specific information. Such research represents poor methodology, but without a professor looking over the shoulder, a student is likely to be tempted. The result of students using this very convenient means of expanding their bibliographies--unless the professor spends increased time helping with the initial research and/or suggesting revisions and rereading the paper--is that the students get a lower grade than expected without quite understanding what went wrong. Using electronic tools, as valuable as they can be, demands more rather than less time from all concerned.

In many ways, then, the use of electronic resources magnifies faults that students have always had, forcing them and their professors to work harder and to develop a more sophisticated research ability much earlier in their matriculation than ever before. I recently learned this in practice from one of my first-year students. The young man, an African-American, was to write on the topic: "The Ku Klux Klan in the 1990s: Real Threat or Kooks?" Although instructed to hand in a bibliography and outline and given the option of having rough drafts reviewed, he did nothing until the deadline was near. Then he typed "Ku Klux Klan" into one of the standard search engines and was promptly viewing a Klan homepage. Not only did this give him lots of information, it also had links that at the click of his mouse button took him to other Klan sites.<sup>23</sup> In half an hour he had downloaded the suggested minimum number of sources. His paper presented the KKK as a white equivalent of the Southern Christian Leadership Conference and David Duke as the equivalent of Martin Luther King, Jr. He was taken aback when the paper was criticized as one-sided and his uncritical use of sources cost him grade points. He had access to some excellent primary sources for his research, but the computer had made it easier to delay and still do the minimum research, easier to get one-sided sources, and harder to realize that the sources were biased. Neither he nor I worked hard enough on that paper.

Although some people maintain that the nature of the medium makes the effort of research seem more like fun than work to the student of the 1990s,<sup>24</sup> the real work

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<sup>23</sup>He saw 10 of the 200 plus that are reportedly available. See "Web of Fear," *The Macon Telegraph*, March 15, 1997.

<sup>24</sup>Oppenheimer, 47-48.



never starts until the information from which the paper is to be written has been acquired (in other words, after leaving the library or exiting Netscape). Of course, convenient access to sources is a good thing for graduate students, but for undergraduates, and especially those in survey courses, that is not so true. The latter are in the process of learning methodology and acquiring context, and once beyond superficiality, breadth is more important than depth. They must learn what to do with information and how it fits into the larger picture. Being overwhelmed with quantity at the beginning of the process is not helpful. Past generations of historians learned their craft in old-fashioned libraries, and, as they gained skill and background knowledge, they sought increasingly detailed and extensive resources. Finding such resources is now sometimes easier thanks to the Internet, but their value is still dependent on the ability to use them effectively. That skill is only developed--the fun promised by Big Bird on Sesame Street notwithstanding--in the laborious, traditional manner.

My technologically-oriented colleagues, who often seem strangely defensive, and react to my cautiousness about electronic sources as if I were joining the Iraqi government's newspaper, *Al Jumhuriya*, in condemning the Internet as "the end of civilizations, cultures, and ethics."<sup>25</sup> They then spend much time telling me about what the Net will be like in the future when all its problems have been solved<sup>26</sup>--as though my concerns were based on technological problems. The assumption always seems to be that computers offer only the best for education. Although there has been much research that argues in favor of computers in the classroom (with the debate mostly focused on lower grade levels), questions have been raised.<sup>27</sup> I suspect that it will be some years--more likely decades--before there is any consensus about the effect of computers on education. It is certainly premature to abandon the printed word, although some libraries seem so inclined. The San Francisco public library disposed

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<sup>25</sup>AP Wire Online, February 17, 1997, at <http://www.wire.ap.org>.

<sup>26</sup>For an example of this sort of enthusiasm about what might be, see J.M. Barrie and D.E. Presti, "The World Wide Web as an Instructional Tool," *Science*, 274 (Oct. 18, 1996), 371-2. The idea of correcting technical problems with more technology is neither new nor without critics. See John McDermott, "Technology: The Opiate of the Intellectuals," in *Technology and the Future*, 7th ed., ed. By Albert H. Teich (New York, 1977), 77-92.

<sup>27</sup>For popular comments see Stoll, *passim*; Oppenheimer, 45-62; Lyric Wallwork Winik, "Do Computers Help Children Learn?" *Parade Magazine* (Feb. 2, 1997), 8-9. More scholarly questioners include Stephen Kerr (ed.), *Technology in the Future of Schooling* (Chicago, 1996); Sherry Turkle, *Life on the Screen: Identity in the Age of the Internet* (New York, 1995); Neil Postman, *The End of Education* (New York, 1995); Jane Healy, *Endangered Minds: Why Children Don't Think and What We Can Do About It* (New York, 1990); Larry Cuban, *Teachers and Machines: The Classroom Use of Technology Since 1920* (New York, 1920); Himmerfarb, A56; O'Malley and Rosenzweig, 133, 136-138.



of more than 100,000 books to make room for more terminals,<sup>28</sup> and the New York Public Library reduced browsing opportunities in favor of a computer catalog that provides limited access and confuses even some who work professionally with computerized information retrieval.<sup>29</sup> My concern is guiding student research through the maze as it exists today. I think that such guidance is going to take a great deal of time and effort to overcome the nature of the medium and the enormous variety of sources it provides. Students will need help from professors who not only understand the value of electronic research, but who also understand its difficulties and pitfalls. And they will need teachers who do not fall into the trap of magical thinking and assume that the problems and hard work of research and writing have been electronically whisked into the pages of history.

<sup>28</sup>*Morning Edition*, National Public Radio, February 20, 1997.

<sup>29</sup>Ingrid Eisenstadter, "My Turn: A Tangled Info Web," *Newsweek* (February 17, 1997), 16.