Revolution in the Library*

GERTRUDE HIMMELFARB

ABSTRACT
WE ARE WITNESSING AN ELECTRONIC REVOLUTION in the library which may prove to be a revolution in the humanities and even in the nature of learning and education. Like many revolutions, it is salutary up to a point, but it tends to go beyond that point. In cyberspace, every source seems as authoritative as every other. The revolution tends to depreciate the book in hand and to incapacitate us for thinking about ideas rather than amassing facts. The humanities are an essentially human enterprise of which the record reposes in books in libraries; this is where we look for truth, knowledge, and wisdom. We must hope that the central role of libraries in preserving these ideas will survive the electronic revolution.

INTRODUCTION

Historians are notoriously wary of the word *revolution*. Unlike journalists, who find revolutions in every twist and turn of political events, intellectual movements, technological innovations, sartorial fashions, historians like to think that their revolutions last more than a month or two, or a year or two, or even a decade or two. Indeed, some historians—older historians like myself—are so sparing in their use of the word that they reserve it for changes that dramatically alter the course of entire centuries. Thus the Cromwellian revolution in England, complete with the decapitation of the king, is said to be not a serious revolution; at best it

was only a civil war. Nor was the so-called Glorious Revolution that altered the succession to the throne; that was entirely too peaceful, too "glorious," to qualify as a revolution.

But there are, even the most cautious historian will agree, genuine revolutions. The French Revolution surely was one such, and probably the American Revolution (although this is still disputed; a colonial revolt, the English prefer to call it). And finally, after decades of indecision, the industrial revolution has been admitted into the pantheon of revolutions. When I was in graduate school, the term "industrial revolution" always appeared in quotation marks to suggest that it was not really a revolution. Today, even the most skeptical of historians agree that it was a real revolution. And having conceded that, some of us are prepared to say that we are now witnessing another revolution, a post-industrial revolution, the electronic revolution. Like all revolutions, this has ramifications far beyond its immediate context, for it may prove to be a revolution not only in the library itself, the way books are catalogued, stored, and circulated, but in the nature of learning and education.

The library is, and always has been, the heart of a college. I recall witnessing a demonstration at a university in the late 1960s, when the students demanded to be "empowered," as they said, and the professors protested: "But we are the university." In fact, librarians have as much right to make that claim. For professors—professors of the humanities, at any rate—as much as students, are the creatures of the library. Just as the laboratory is the domain of the sciences, so the library is the domain of the humanities. For it is the library that is the repository of the learning and wisdom that are transmitted from the professors to the students.

If the library is now in the throes of a revolution—if desks and carrels in the library are being transformed into "workstations," and students and scholars find themselves consulting the Internet more often than books— something momentous is happening, something far more consequential than a mere technological innovation. The last time we experienced such an event was the invention of the printing press almost half a millennium ago, and that, as we now know, had enormous consequences. Among other things, it was responsible for the creation of libraries. There had been libraries, to be sure, before Gutenberg's invention. The most famous was the library in Alexandria founded by Ptolemy I in the fourth century B.C.—famous partly because of its infamous destruction by the Roman emperors in the third and fourth centuries A.D. But other libraries, public and private, survived and flourished in Jerusalem, Greece, and Rome. At about the time that Gutenberg was perfecting his printing press, the Vatican Library was formed; its first catalog listed 2,500 volumes. Today, thanks to Gutenberg, a good many scholars have that many books or more in their home or office.

The print revolution is the perfect exemplar of the principle of quantity transmuted into quality. The quantum leap in the number of books now available to each individual or library is almost the least of the consequences of that revolution. More significant is its democratizing effect—the liberation of the culture from the control of clerics and scribes. The relative ease and cheapness of printing transferred the production of books to artisans and merchants, who were responsible neither to ecclesiastical nor to secular authorities but only to the dictates of the consumer and the market. Thus ephemeral popular books could be produced as cheaply as classical ones, and heretical tracts as readily as canonical ones.

Not only could numerous copies of each book be produced, but they could be produced in identical form. Thus every literate person could have access to the same text of the Bible, and could interpret and judge it without benefit of the mediating authorities of church or state. It is no accident, some historians suggest, that the print revolution preceded the Protestant Reformation; were it not for Gutenberg, they say, the Reformation might have petered out or been suppressed, as so many medieval heresies were.

Now, with the electronic revolution, we are taking that democratizing process a giant step forward. It is not only the library catalogue that is computerized; the computer can call up a variety of other catalogues, indexes, databases, CD-Roms, the Internet, as well as books, journals, newspapers, archives, even manuscript collections from other libraries. Potentially, at least, the electronic revolution makes even smaller libraries the equivalent of libraries in major research universities and scholarly institutions. And it can do more than that. It can make those books, journals, databases, and so on, "talk to each other," as cyberspace aficionados say. All you have to do is type in your request for information and the computer will collate the sources, synthesize them, and present the results for you on your screen.

And it can do still more. It can make you not only the recipient of all this information but the creator of it, an active partner in this "interactive process" (another cyberspace term). Your thoughts on any subject, your reflections, impressions, opinions, even your latest term paper, can find their way into the Internet by means of your "home page." Recently I heard a child on TV—an eight or nine year old—exult in the potentialities of this marvelous device. "It's wonderful," he said, "to be able to ask a question on your home page and have lots of people answer it for you." All of the adults on that program shared his enthusiasm. I wonder how many listeners recalled that only a few years ago he would have had to go to a textbook or encyclopedia for the answer to his question—an implicit recognition on his part that these sources were more reliable, more authoritative, than "lots of people."

By this time you will have suspected that I am of two minds about the

new electronic revolution. Like a great many revolutions, it is salutary—
up to a point. But, like most revolutions, it tends to go beyond that point.
The democratization of knowledge is all to the good if that means the
democratization of access to knowledge. Anyone who spends a fair amount
of time in the library is grateful for a computerized catalog that gives in-
formation not only about the books and journals in that particular library
but in all the libraries in the area or even in the country. And anyone who
does not have access to a major research library, or who seeks information
about a public figure or event in the recent past, or who wants to read or
reread a particular book review or article, will be grateful to the Internet
for retrieving that information quickly and efficiently.

But democratization of the access to knowledge should not be con-
fused with the democratization of knowledge itself. And this is where the
Internet, or any system of electronic networking, may be misleading and
even pernicious. In cyberspace, every source seems as authoritative as
every other. As that child on TV put it, "lots of people" will profess to have
the answer to his question. The search for a name or phrase on the Internet
will produce a comic strip or advertising slogan as readily as a quotation
from the Bible or Shakespeare. The Internet is an equal opportunity
resource; it recognizes no rank or status or privilege. In that democratic
universe, all sources, all ideas, all theories seem equally valid and pertinent.

It takes a discriminating mind, a mind that is already stocked with
knowledge and trained in critical discernment, to distinguish between
Peanuts and Shakespeare—between the trivial and the important, the
ephemeral and the enduring, the true and the false. It is just this sense of
discrimination that the humanities have traditionally cultivated and that
they must now nurture even more strenuously if the electronic revolution
is to do more good than bad.

The humanities have had much to contend with in recent years. The
real revolution started even before the electronic one, and it started not
with a technological revolution but with an intellectual one. It began a
few decades ago with the attack on the "canon"—the great books that
have traditionally been thought to constitute the heart of the humanities
and the core of a liberal education. In the beginning, the criticism was
leveled at the particular books in the canon—or rather at the authors of
the books. Plato and Aristotle, Augustine and Aquinas, Shakespeare and
Milton, Marx and Mill, all were derided as "Dead White Males"—"DWMS"
or "Dweems" as they were familiarly known. The canon, it was charged,
was sexist, elitist, and regressive, prejudiced against women, against blacks,
and against the living.

But that was only the opening skirmish of the war. The attack esca-
lated with an assault against the very idea of a canon. Any canon, the
argument went, was objectionable because it was fixed, prescribed, im-
posed from without—therefore oppressive and authoritarian. When it

was pointed out that the canon was not in fact fixed, that it differed from college to college and changed from one year to the next, that some old books were retired while new ones emerged (some by women, blacks, and even, horrors, the living), a new strategy came into play.

I first encountered this new turn of the argument some years ago when I participated in a panel discussion on the subject of the canon at a distinguished liberal arts college. One of the panelists, the head of the Women's Studies program at the college, explained that the problem is not only that the "Big Guys"—her variation on "Dead White Males"—are Guys, but also that they are Big, thus "privileging," as she put it, big books, great books. This, she complained, is what is really offensive in the canon. The canon—any canon—assumes that there is such a thing as great books containing great and enduring ideas and truths worthy of being studied and valued. Moreover, it assumes that these ideas and truths transcend time and place, race and ethnicity, class and gender, country and nationality. These assumptions, she said, are not only elitist; they are profoundly sexist, for they reflect a distinctively masculine view of how people think and feel, a masculine conception of ideas and reason. She concluded by calling upon women, and feminists particularly, to repudiate this masculine sensibility and adopt a uniquely feminine one, which celebrates not great ideas and truths but "the little things in women's lives . . . , the small nurturing things that women do."

I was taken aback by this argument. I could only protest that a retreat to "the little things in women's lives" is not my idea of what feminism is all about; it sounds to me suspiciously like a retreat to the kitchen. Nor do I agree that great books and ideas are distinctively masculine, nor that they are at all elitist. On the contrary, I believe them to be distinctively human and eminently democratic. They have survived the ages precisely because they are accessible to people of different backgrounds and characters, all of whom can aspire to understand them and to be elevated by them. This has been the principle inspiring the humanities, and, indeed, the very idea of a liberal education.

Since that episode, this challenge, not only to the canon but to the humanities and liberal education, has become all too familiar, and not only on the part of feminists. It is now espoused in a more sophisticated form by literary critics, philosophers, historians, and others under the banner of postmodernism, a doctrine that has become extremely influential, in some cases dominant, on many campuses and in many disciplines.

The mainspring of postmodernism is a radical—an absolute, one might say—relativism, skepticism, and subjectivism that rejects not only the idea of the canon, and not only the idea of greatness, but the very idea of truth. For the postmodernist, there is no truth, no knowledge, no objectivity, no reason, and ultimately, no reality. Nothing is fixed, nothing is

permanent, nothing is transcendent. Everything is in a state of total rela-
tivity and perennial flux. There is no correspondence between language
and reality; indeed, there is no "essential" reality. What appears to be real
is illusory, deceptive, problematic, indeterminate. What appears to be
true is nothing more than what the power structure, the "hegemonic"
authority in society, deems to be true.

To those of you who have been happily spared this latest intellectual
fashion, it may seem bizarre and improbable. I can only assure you that it
is all too prevalent in all fields of the humanities. This is not to say that all
or even most professors of literature, history, or philosophy are
postmodernists. But some of the most prestigious professors are, includ-
ing the recent presidents of several important professional associations.
And many of the brightest and most ambitious younger professors and
graduate students are attracted to a mode of thought that they believe to
be at the "cutting edge," the "vanguard," of their disciplines. More impor-
tant is the fact that even those who do not think of themselves as
postmodernists often share the extreme relativism and subjectivism that
now pervade the humanities as a whole. In the leading professional jour-
nals today, the words "truth," "objectivity," "reason," and "reality" gener-
ally appear with quotation marks around them, suggesting how specious
these concepts are.

What we are now confronting, therefore, is not one but two revolu-
tions—an intellectual and a technological revolution—which bear an un-
canny resemblance to each other and have a symbiotic relationship to
each other. If I were given to conspiratorial theories, I might speculate
that Bill Gates, the chairman of Microsoft, is a secret agent of Jacques
Derrida, the high priest of postmodernism. For the new technology is the
perfect medium for the new ideology. Surfing through cyberspace is a
truly postmodernist experience, a liberation from what the postmodernist
calls "linear thinking"—a logical rational mode of reasoning.

Words and images appear on the screen in rapid succession and in no
predetermined or logical order. The reader, or rather viewer, patches
them together as he likes, making of them what he will, connecting and
disconnecting them at his pleasure. There is no fixed text, no authorita-
tive source, no restrictions of space or time to confine him. (Compare the
infinite capacity of the moving screen with the physical spatial limitations
of the book or the speed of scrolling on the screen with turning the pages
of a book.)

Another buzzword of postmodernism is intertextuality—intruding into
the text of a poem, for example, any words, ideas, or events, however
remote or contradictory, that may come to the mind of the reader. The
screen enormously facilitates such intertextuality, as it calls up other texts
or images that may not even have occurred to the reader and that may
have little or no bearing on the poem. The poem becomes, in the language

of postmodernism, indeterminate, problematic, ironic. And the reading of the poem becomes, in effect, an exercise in "virtual reality," having as little relation to the real poem as an electronic game of virtual reality has to the real world.

We are thus experiencing a revolution, not only in library services but in the very conception of the library. And, like most revolutions, this one has enormous potentialities for good and bad. Among its undeniable virtues are the computerized catalog, so much more efficient and informative than the old card catalog; the ready access to other library holdings and databases; the ability to retrieve rapidly information and material that otherwise would have taken days or would have been irrecoverable; the convenience of networking with colleagues working on similar subjects, exchanging ideas, information, and, let us admit it, the kind of professional and even personal gossip that goes with the trade.

But—and this is a large but—all this will be to the good only if the virtues of the new library are made to complement, rather than supplant, those of the old. And I am confident this can be done, although it will take a conscious effort to do it—to resist the seductions of the new medium, to refrain from mindless, endless cybersurfing, to withstand the tempting distractions along the way, to retain a sense of what is important, pertinent, and authoritative. Above all, it will mean keeping faith with the old library—with books that are meant to be read, not merely surfed. E-mail enthusiasts refer to postal mail as "snailmail." Some books, to be sure, are better surfed ("skimmed," as we used to say) than read. But others should only be read at a snail's pace; anything faster than that defeats the purpose and violates the text.

This brings me to the heart of the matter—to the particular relationship between the library and the humanities. In theory, there is no reason why Milton's *Paradise Lost* or Rousseau's *Social Contract* cannot be called up on the screen, assuming they are "online." But even if they are online, there is every reason to read them in book form—"hard copy," as we now say—rather than on the screen. With the physical volume in our hand, we are necessarily aware of the substantiality, the reality of the work, the text as it is, as Milton or Rousseau wrote it and meant us to read it. Of course, we will interpret and understand it within our own framework of reference; and of course we will draw upon other sources—critical, historical, biographical—to help interpret and understand it. But we should always be brought back to the text, to the book in hand. The book is the reality; there is no virtual reality here. Moreover, each page of the book—in the case of a difficult work, each line of the page—has a distinctness, a hard reality of its own. Holding the book in hand, open at that page, it is easy to concentrate the mind upon it, to linger over it, mull over it, take as long as necessary to try to understand and appreciate it.

Reading it on the screen, however, is a quite different experience.

There we tend to become postmodernists in spite of ourselves. It takes a great effort of will to concentrate on the text unaccompanied by whatever else may happen to be called up on the screen along with it. And it takes a still greater effort to remain fixed on a single page without scrolling on to the next, let alone to concentrate on a single passage, line, or word. The medium itself is too fluid, too mobile and volatile, to encourage any sustained effort of thought. It makes us impatient, eager to get on to the next visual presentation. And the more accustomed we become to the new medium, the more difficult it is to retain the old habits of study and thought. We become habituated to a fast pace, an ever-changing scene, a rapid succession of sensations and impressions. We become incapacitated for the longer, slower, less feverish tempo of the book.

We also become incapacitated for thinking seriously about ideas rather than amassing facts. For the purpose of retrieving facts, the Internet is enormously helpful, although even here some caveats are in order. We need to concentrate our mind on exactly what it is we want to know, to resist being distracted by fascinating but irrelevant facts, and—most important—to retain the ability to distinguish between facts and opinions, between reputable sources and dubious ones. The humanities, however, is about more than the retrieval of facts. It is also about appreciating a poem, understanding an idea, finding significance in a historical event, following the logic of an argument, reasoning about human nature, inquiring into ethical dilemmas, making rational and moral judgments—all of which require an exercise of mind that calls upon all the human faculties, and which no technology, however sophisticated, can satisfy. If we want, for example, a concordance to the Bible, we can find no better medium than the Internet. But if we want to read the Bible, to study it, think about it, reflect upon it, we should have it in our hands, for that is the only way of getting it into our minds and our hearts.

The humanities are an essentially human enterprise—an enterprise to which human beings have devoted themselves for all of civilized history. The record of that enterprise reposes in the library in the form of books—a vast multitude of books, including, to be sure, many worthless or meretricious ones, but also all the great ones. These are the books that sustain our minds and inspire our imaginations. It is there that we look for truth, for knowledge, for wisdom. And it is these ideals that we hope will survive our latest revolution.

The Bodleian Library in Oxford, one of the six copyright libraries to receive a copy of each new book published in the UK, recently received a grant to preserve a large part of the digital content left to it by writers and intellectuals. Librarians now find themselves having to act as guides not just to information itself, but to the myriad ways of accessing it that are available. In these libraries of the future, gone are the clichés represented by Philip Larkin and his "loaf-haired" secretary. However, this revolution in the nature of libraries and librarianship encompasses more than just the services they now provide. It can also be seen in the very fabric of the buildings. But grand designs and new uses aside, some of the most important changes are taking place on a much smaller scale. Industry 4.0 Revolution is the current trend of revolutionary technology, which has affected many services in this age of globalization. Similar, Library services have highly been affected by 4IR. An effort has been made to highlight the vari-ous challenges being faced by libraries and librarians in this age of information. Some solutions have been presented to the library professionals to overcome this technology to boost its services up to the entire satisfaction of the patrons. Research limitations/implications. The strategic approach in this study can serve the academicians and practitione In the nineteenth and twentieth centuries, libraries—particularly public and academic libraries—achieved a fundamental, almost revered place in society. Libraries. Page 24 Share Cite. Suggested Citation:"1. Digital Revolution, Library Evolution." National Research Council. 2000. LC21: A Digital Strategy for the Library of Congress. A revolution in the library? You bet. I started with this iconic photo of a library, but we needed to change things up. Libraries are emergency rooms for the mind, where anyone can walk in and learn. So they had to be open to all and not what we think of when we say that word. I fell into the profession by accident. I was told I could be a nurse, a teacher or a library in when I was 12. I really didn't like kids or blood and vowed to make libraries friendly. For people like me who needed to talk in orderto learn, I thought that I could do it. My goal was easier said than done. These table