

C. The Impact of Communication and Information Technology on the Production of Sources

Although historians make choices among the materials left by the past, treating one object or text as a source and rejecting another or relegating it to secondary status in the hierarchy of evidence, they must choose from what is available. Only certain kinds of potential evidence was produced in any given age, only some of that was preserved, and only a portion of that is accessible to any given historian. If they are to make wise choices among potential sources, historians must thus consider the ways a given source was created, why and how it was preserved, and why it has been stored in an archive, museum, library, or any such research site.

The availability of sources is, in general, very much determined by technology, that is by the conditions under which a given culture received and collected information. The mechanisms of communication and the speed at which information circulated are both elements of this technological history of sources. This history can be divided into three periods.

In the first, information was transmitted by people who walked or ran with the news, at a rate probably never exceeding six miles per hour. The medium of transmission was thus the messenger himself. Sometimes messages were also sent by visual signal (flags) or by sound (drums), and thus news traveled faster, but in none of these cases could a complex message be delivered with great precision, and in all of them geographic or climatic conditions could radically limit the range and speed of transmission. Today, such methods are of course rarely used, but some conventions have survived—the custom, for example, of flying flags at half mast to mark a death or the practice of ringing sirens to sound an alarm.

In the second phase, information was transported using pack animals. This phase began about 2000 B.C.E. in central Asia, about 1000 B.C.E. in the Mediterranean area, and sometime during the sixteenth century among the Incas in Peru, and is still used in some parts of South America and Africa. Average speeds using this form of transportation were at least double, often triple, those in areas where information was carried by people.

Other technical developments further improved this mode of transmission. By 3000 B.C.E., Mesopotamians were using clay tablets to record information; around 1000 B.C.E. the Phoenicians developed an alphabet, which made writing much more efficient. Persian kings created the courier system of transport, in which messages were handcarried by specially designated agents, a method later used both in Byzantium and in Rome. By the thirteenth century an elaborate system for delivering the

mail had been worked out to connect the Florentine banking and merchant houses to the trade fairs in Champagne (France); the system was adopted by the pope in the following century. By the end of the fifteenth century Europe had a net of postal connections that had been developed by the Milanese firm of Thurn and Taxis; in 1505 the firm was granted a monopoly for the Spanish post.

In 1436, a trip between London and Venice took 23 to 51 days, and in 1442, a journey from Genoa to Bruges lasted 22 to 25 days. Thus, distance traveled daily averaged 30 to about 50 miles. Between the fifteenth and the nineteenth century, this rate of travel was to double, thanks to the long-distance routes that were constructed during this period.

Three categories of information were transported in this period, each of which required a slightly different technology of literacy. The first included secret correspondence ("litterae clausae") of various kinds (economic or business, diplomatic, military) which had to be written in code. The second was general correspondence ("litterae patentes") which, in time, was taken over by the newspaper, the third category. The forerunners in the production of this genre were the Venetians, who regularly penned commentaries (called *avvisi*) to accompany the business correspondence they sent all over Europe; they were followed by the German trade cities like Nuremberg and Wittenberg, which produced what they still call *Zeitungen* (newspapers). True, printed newspapers with a regular periodicity appeared first in Strasbourg (1609) and Antwerp (1629). It was only later that a distinction was made between simple newsheets (which had no explicit editorial content) and "newspapers of opinion."

The third phase of communication is, of course, defined by mechanical media. In 1830, the train increased the speed at which information could be transmitted to 30 to 35 miles per hour. With the invention of the telegraph in 1844, information transmission became almost instantaneous. By 1896 it required only seven minutes to transmit a message from one place on the globe to another. The more recent innovations such as telephone, fax, radio, television, and satellite have made information transmission truly instantaneous and practically universal. Accompanying this technological revolution were organizational changes in the way information was gathered and delivered. The nineteenth century saw the emergence of huge wire services such as Reuters and U.P.I, which provide news services to thousands of small clients; most newspapers rely entirely on these services for information from beyond their own locality and thus have no independent sources by which they can verify the data they receive.

It is evident that the speed at which a piece of information can be trans-

mitted, along with its ubiquitousness, directly affects its influence. Today's media (CNN, for example) make the world a "global village," and that is in some sense a cheerful thought, for it means that people today increasingly have access to exactly the same information at the same time and often react similarly. But it also means that an incident such as the Cuban Missile Crisis of 1962 elicits an immediate reaction, in Moscow and Washington alike, with all the risks that such speed entails.⁴ Still, there are real advantages to the speed of communication possible today. Consider, for example, that when the harvest failed in fifteenth-century England or the Low Countries, it took two months before grain could be purchased in the Baltic area and another two months before it arrived where needed—far too late for a huge portion of the population.

The power of modern-day communications, with their steady stream of fashion changes and technical innovations, depends, however, not just on the speed at which messages travel but also on the quality of the carrier and of the distribution system. It also depends on the readiness of the audience to accept the innovation. It is, for example, no accident that the first mechanical clocks were developed in Italy in the fourteenth century and were first imitated and distributed in Flanders and England, where Italy had good commercial relations and where the commercial infrastructure and socioeconomic system were similar.

The material qualities of the message itself affect its influence as well. When, in the human past, messages were first written and then printed, their survivability and distribution potential increased enormously, but with the advent of radio and TV, messages have in some ways become more ephemeral. In general, one can say that the quality and accuracy of messages increased when letters and manuscripts replaced oral transmissions and then, later, printed materials replaced handwritten. Marshall McLuhan has famously argued, in fact, that the "medium is the message," that the form in which information comes is often more significant than the message itself. The centuries-long domination of the written word implicitly privileged—and developed capacities for—abstract thinking; TV and film, in contrast, emphasize the visual, the concrete.

Mass communications can also create collective memories. By this, we mean that when information about an event, or series of events, is broadcast widely and simultaneously, the event becomes part of a shared experience, part of historical memory. The Vietnam War in the late sixties and early seventies provides a perfect example: the daily news reports about

4. See, on the Cuban missile crisis, E. R. May and P. D. Zelikow, *The Kennedy Tapes: Inside the White House during the Cuban Missile Crisis* (Cambridge, Mass., 1997).

the war created for a great many Americans, especially young Americans, a single experience, an experience that galvanized political resistance to the war. The lesson, it should be noted, was not lost on the American military. Media coverage of the Gulf War (1990–91) was much more restricted, and if a collective memory survives of that war, it will surely be of the way it was covered rather than the conflict itself. The Velvet Revolution in Prague, the fall of the Berlin Wall and Tiananmen Square, all in 1989, similarly joined the West's collective memory, largely as a result of the mass media.

Mass media and the technology that makes it possible have thus utterly changed the character of news reporting and its relationship to scholarship. Very early in the history of the press, however, even in the days of the sixteenth-century *avvisi* written strictly for Italian businessmen, the mass potential of the press was recognized, and with that development came political control. Even then, governments sought to limit the press's potentially subversive character by requiring that such newspapers obtain official licenses to publish. In the nineteenth century, western European governments often imposed onerous taxes on newspapers, a practice which restricted their ability to collect, publish, and circulate news; it was only under the pressure of public opinion that such taxes were abolished, in Belgium in 1848, for example, England in 1855, and France in 1881.

Today, most newspapers in the West depend for their financial support on governments (the former Soviet Union's *Pravda*, for example), private interest groups (*L'Osservatore Romano*) or private firms (*Stampa*, in Italy, is owned by Fiat). Thus, most are subject to political and ideological pressures of various kinds. Sometimes it is subtle, delivered implicitly; sometimes it is more direct. Dictatorial regimes have gone even further, often even prescribing what is to be published. An early highpoint (or low-point) in government control of the press was reached by Hitler's minister for propaganda, Joseph Goebbels, with his *Ministerium für Volksaufklärung und Propaganda*. The historical consequences of this ominous move are well known.

In contrast, some presses are relatively "free," in that they function independently of political affiliation or other direct control. The *London Times* was for years the archetypal newspaper of this genre; on the continent, France's *Le Monde* and Germany's *Frankfurter Allgemeine Zeitung* represent the tradition. In the United States, a handful of nationally circulated newspapers such as the *New York Times* and the *Washington Post* provide critical coverage of politics and are powerfully able to mobilize public opinion. The rapid technological developments of recent years—those making CNN or the Internet possible, for example—are often

considered part of this tradition of press "freedom." Although the growth of these media is driven by commercial motives, it is frequently argued that they provide such easy access, both for the public and for newsmakers, that they help preserve the "freedom of the press."

The press, then, including the nonprint press, is considerably more than a purveyor of news; it can play a decisive role in political processes themselves. Consider, for example, the importance of the *Washington Post's* coverage of Watergate; or more recently of the *New York Times's* April 13, 1995, report that Serbian President Slobodan Milosevic was directly associated with the Bosnian concentration camps run by Serb paramilitaries and the systematic extermination of Muslim populations in the territory. Ted Turner's CNN goes a step further, providing uniform, 24-hour per day TV coverage around the world. In Turner's hands, the news becomes a purely commercial, uniform product, and simultaneously an important vehicle by which politicians and governments seek to influence world events. In 1991, a pan-Arab channel (MBC) was begun (out of London), and in 1993, the Europeans launched their own competitor (Euronews). In the same year, the United Kingdom's BBC went global.

No matter the medium in which it is delivered and no matter the care with which editorial freedom is protected, however, every news report is in some sense selective and therefore "biased." The journalist who composes it—or the team of journalists and editors who put it together—is choosing among the thousands and thousands of pieces of information available, on the basis of what might interest or please the "public," the owner, the state, one or another interest group, or a certain ideological position. One journalist may decide that, having been told of one instance of a development—let us say the first heart transplant—the public does not need to know about subsequent operations of the same type; another journalist, in contrast, may decide that the successful repetition of the operation is the important point, and she will thus continue to "follow the story." In fact, she is not "following" the story; she is creating it. The point is not, however, that one journalist is right and another wrong. The point is that journalists are always affecting the news, making one story "important," and another "unimportant," making "news" on one hand and "not-news" on the other.

Of course, no matter what story he or she is choosing to tell, the journalist is responsible for verifying sources, for making sure that the bits of information used are accurate. Recent scandals in the U.S. press have demonstrated how easily such responsibility can be abdicated. In the rush to "scoop," to keep up with the competition, journalists have sometimes

been exposed for making up facts or, in the case of a recent erroneous CNN-*Time* story about the U.S. government's use of nerve gases in the Gulf War, have been shown to have done sloppy investigations of their sources.

Let us close this discussion of the press's functions with a few comments for the scholar who would use the press—whether the premodern *avvisi* or the modern Internet flash—as a source. To employ these sources usefully, the historian must consider not just the content of the text, but its author and issuer, the publisher and its institutional location, the audience, and the immediate (political, social, economic) context of its original publication. It is surely true that sensational or tendentious reports can have a bigger effect on public opinion than a sober, careful report, and it may be that the historian will have to take the first more seriously than the second, for it was the first that had the greater impact. In addition, the historian must remember that the emission of a report itself can affect the events being reported, that there is no clear separation between the event and the report of the event. Normally, we imagine, a report of an event is *about* the event, not part of it. But sometimes this relationship is distorted, as when participants in a protest listen to reports about their actions as they go to the streets (a common event during the student revolts in the United States and Europe in the late 1960s and early 1970s), when voters have news of early returns in an election, or when reports of polls influence the next poll—or the vote itself.

Finally, the careful scholar will be attentive to what we might call “short-circuiting” of information flows, the distortion that occurs as information passes from hand to hand. Scholars using sources from oral cultures—folktales, for example—are very sensitive to such risks, for tales told orally can easily change in the telling, but even those historians using printed sources or the reports from electronic media are not free of these problems of interpretation. A message delivered electronically can be literally distorted, just as can a line of print or a story passed by mouth from generation to generation. The listener or reader can misinterpret what is reported, simply because he or she does not understand the linguistic or cultural code in which the message was written, or does not grasp the context of the message. Let us illustrate with a very simple example: what would a foreigner with very little ability in the English language make of an exchange between two Americans being formally introduced?—one offers her hand and says, “How do you do?”; the other replies in kind. Only someone deep in the culture can “read” that text!