DIGITAL JOURNALISM

Emerging Media and the Changing Horizons of Journalism

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The Meanings and Implications of Convergence

Rich Gordon

AT THE DAWN OF THE TWENTY-FIRST CENTURY, it seems nearly impossible to follow developments in technology, business, or journalism without encountering the word *convergence*. The term has been applied to corporate strategies (the merger of AOL and Time Warner), to technological developments (video on demand and interactive television), to marketing efforts (partnerships between newspapers and TV stations to promote each other's work), to job descriptions ("backpack journalists," who return from the scene of a story with words, audio, and video), and to storytelling techniques (the melding of text and multimedia on news Web sites). There is a danger that "convergence" will become a buzzword, thrown around casually in discussions of media, technology, and journalism, with different participants using the same word to mean different things. If we are going to think clearly about journalism's present and future, we're going to need to understand these different meanings and their implications.

Tracing the Meanings of a Word

The term *convergence* comes originally from the world of science and mathematics. According to the Oxford English Dictionary, its earliest use can be traced to William Derham, an English scientist in the seventeenth and eighteenth centuries who is best known for his effort to measure the speed of sound by timing the interval between the flash and roar of a cannon. In 1713, Derham's *Physico-Theology: Or a Demonstration of the Being and Attributes of God, from His Works of Creation* referred to "convergences and divergences of the rays." In the ensuing centuries, the term was applied to wind currents, mathematical series, nonparallel lines, and evolutionary biology. (Charles Darwin used the term in the 1866 edition of *The Origin of Species.*)[1] By the middle of the twentieth century, the term was also being applied to political science (convergence of U.S. and Soviet systems) and economics (convergence of national economies into a global economy).

In the 1960s and 1970s, the development of computers and networks established the context for new meanings. Government agencies and businesses began using computers to store and retrieve information. Then, they began transferring this digital content over telecommunications systems. Finally, in the mid-1970s, came the realization that once information could be stored digitally and communicated across a network, the technologies that consumers use to access information and entertainment could be transformed. Commercial enterprises began to experiment with computer online services and videotext delivered to TV screens. The first online services in the United States, The Source and CompuServe, began offering dial-up access in 1978. At about the same time, the British Post Office was rolling out its Prestel videotext service.[2]

It won't be easy to figure out exactly who first used the word "convergence" in connection with communications technologies. But communications scholar Ithiel de Sola Pool clearly helped popularize it. In his landmark 1983 book, *The Technologies of Freedom*, Pool described what he called "the convergence of modes":

> The explanation for the current convergence between historically separated modes of communication lies in the hability of digital electronics. Conversation, theater, news, and text are all increasingly delivered electronically. . . . [E]lectronic technology is bringing all modes of communications into one grand system.[3]

Even before Pool's book was published, leading thinkers in journalism and academia were coming to realize that technological changes were going to affect the news media. William Paley, chairman of CBS, gave a speech to a broadcasters' convention in 1980, noting that "the convergence of delivery mechanisms for news and information raises anew some critical First Amendment questions."[4] And as early as 1979, Nicholas Negroponte of the Massachusetts Institute of Technology (MIT) was using three overlapping circles in discussions with business executives he hoped would fund his research. His three circles were labeled "Broadcast and Motion Picture Industry," "Computer Industry," and "Print and Publishing Industry."[5] He predicted that the overlap between the three circles would become almost total by 2000. The executives he addressed found it a compelling vision. He won millions of dollars in financial support from them, enabling MIT to open its celebrated Media Lab in 1985.

One of those who came to embrace Negroponte's view of the world was John Sculley, who left a top executive position at Pepsi in 1983 to become CEO of Apple Computer. To illustrate his vision for Apple in the future, he would display two graphic representations of the "information industry" in 1980 and 2000. For 1980, the graphic showed seven boxes, each representing a discrete industry: media/publishing, information vendors, computers, consumer electronics, telecommunications, office equipment, and distribution. For 2000, the graphic was labeled "Convergence" and represented the industries as overlapping ellipses. And there were new labels where the shapes overlapped, such as "Interactive News," "Virtual Reality," "National Data Highway," "Info on Demand," and "2-Way TV."[6]

When the word *convergence* showed up in the business press in the 1980s and early 1990s, it was often in connection with Sculley and Apple. The word also appeared in articles about CompuServe and competing information services AOL and Prodigy. When the *New York Times* reported in 1994 on the *San Jose Mercury News*'s online edition on AOL, for instance, the article included a subhead reading "A Media Convergence" and said the newspaper's executives "were convinced that technological changes were bringing all forms of media together."[7] This vision of the future seemed to accelerate in the mid-1990s, when the World Wide Web emerged into the popular consciousness and seemed to be the "one grand system" Pool had predicted. By the time AOL and Time Warner announced their landmark merger in early 2000, the word *convergence* had become commonplace in connection with electronic content delivery. In the meantime, though, another development in the news business had set the stage for yet another meaning of the word.

The new development was a decision by newspaper companies to partner with television news stations instead of just competing with them. These partnerships took different forms. In 1993, in Chicago, the Tribune Company launched CLTV, a twenty-four-hour local cable channel that used journalists and content from the *Chicago Tribune*. In other markets, newspapers paired off with local broadcast stations to cross-promote each other's content—in a negotiated partnership with no common ownership. The typical cross-promotional partnership included such elements as a "tomorrow's newspaper headlines" segment on TV, and a tie-in with the TV station's meteorologist on the paper's weather page. Finally, a handful of companies that owned both papers and TV stations in the same market—whose joint ownership predated federal prohibitions of the practice—became more aggressive about cross-promotion and content sharing. The most striking example came in Tampa, where owner Media General constructed a new building to house the news operations of the *Tampa Tribune*, WFLA-TV, and the newspaper's Web site, Tampa Bay Online.

Initially, newspaper-TV relationships weren't labeled as instances of convergence. Within the Tribune Company, which established cable news channels in both Chicago and Orlando, the more common term was *synergy*.[8] And most examples of newspaper/TV collaboration really didn't resemble the traditional ideas underlying technological convergence. Newspaper and TV journalists were not collaborating on content, and they were reaching audiences using traditional print and broadcast technology. But in trying to sell reluctant staff members on the merits of print-TV partnerships, advocates were able to evoke the future by using the word "convergence" as shorthand.

By this time, "convergence" was being used so frequently, in so many different contexts, that it had largely lost its value in focusing discussions about journalism and the news media. But at the same time, the popularity of the word was evidence of its power, especially among advocates for change in newsrooms, media companies, and journalism schools. In a single word, these change agents found a label that conveyed a sense that the world was being transformed and a vision for confronting the future. But the inescapable problem remains: This single word has many different meanings. In the remainder of this chapter, I'll try to explore their significance—in 2002 and in the future—for media companies, readers and viewers, journalism and journalists. First, I'll address the original, technology-rooted definitions, then the ways the term has been applied in media organizations.

Convergence in Media Technology

Pool's idea of a "convergence of modes" conjured up an image of a future where all content would be stored digitally, delivered over a network, and accessed through electronic devices. When the World Wide Web appeared on the scene, some thought that this future was near. But a few years later, it seems clear that it is, at best, quite some time away. In 2002, communications technology looks like this:

- *Content creation:* Most informational content (and some entertainment content) is created using computers and stored digitally. It is often stored in formats, however, that make it difficult to use for more than one purpose. A newspaper article formatted and stored with the layout program QuarkXpress cannot easily be translated into a Web page. A Web page formatted for delivery to a computer must be converted to be readable on an Internet-connected cellular phone. A digital videotape used for broadcast news must be "ingested" into a computer—and, because of bandwidth limitations, compressed—before it can be streamed over the Internet.
- *Content distribution:* More and more people (in the United States, more than half of all households and a greater proportion of businesses and schools) have access to the Internet. And thanks to the World Wide Web, companies that create content are able to distribute it digitally. But while the Internet has changed people's patterns of media usage, it is far from dominant as a distribution channel. As of 2001, according to investment banker and consultant Veronis Suhler Stevenson, the average American spent 149 hours per year (about 24 minutes per day) using the Internet, an amount of time comparable to that spent with newspapers and more than that spent with consumer magazines. But it was less than one-tenth the time spent with television and about one-sixth the time spent with radio.[9] In part, that is because more than one-quarter of Americans don't use the Internet;[10] in part, it is because dial-up connections—relied upon by almost nine in ten home Internet users[11]—are frustratingly slow.
- *Content consumption:* Other than the computer, most consumers do not use digital display devices to view information or entertainment. Although the U.S. Federal Communications Commission (FCC) has set a 2006 deadline for conversion to digital television, most TV viewers rely on analog programming delivered to traditional sets. Cable television companies are the leading providers of high-speed Internet access, but their Ethernet cables connect to computers, not to TV sets or set-top boxes. And while there was a flurry of interest in 2000 and

2001 in e-book readers as a way to distribute digital books, they failed in the marketplace.

In short, the era of complete technology convergence is not yet upon us. But we can see its outlines taking shape. The next decade will see a number of key technology developments:

- The creation and widespread use of digital *content management systems* within media companies, which will store content in digital formats—such as Extensible Markup Language (XML)—that allow it to be delivered relatively easily to different platforms.
- The proliferation of *wireless Internet access*, either through cellular telephone systems or through more localized wireless networks that, in turn, connect to the wired Internet.
- The *transformation of television* as TV sets take on more and more of the attributes of computers. For technology convergence to enter the living room, TVs will need access to the Internet, the capacity to receive and store digital content, and the ability for viewers to interact with content (and advertising) on the screen. All these technology changes are starting to happen. Internet access is available through cable Internet services. Digital broadcasting has already begun. Products such as TiVo and writeable digital video disc (DVD) drives allow the storage and playback of digital video. Cable and satellite TV providers have also begun—especially in Europe—to roll out interactive television services.
- A new generation of *portable devices* that come closer to replicating the advantages of paper will be lighter and will have longer battery life, improved screen resolution, and better viewability in bright light. These devices may be the descendants of today's laptop computers, personal digital assistants, or cellular phones, or they may emerge from laboratories and businesses trying to develop the technology for products with names like "electronic ink" or "e-paper."

For complete digital convergence to become a reality, then, we'll need to see technological changes in every stage of the information infrastructure: from content creation to distribution to consumption. But before that day comes—even if it never arrives—convergence in other forms is affecting the companies that produce information and entertainment, and the people who work in them.

Convergence in Media Organizations

Consider the media company as a hierarchical organization. At the top is a parent corporation, which in turn owns individual media properties. Within each company are the organizational structures, workflow processes, and tactics that reflect the way the enterprise operates. At the bottom are the individual employees who create the content—among them, the journalists. As of 2002, the word *convergence* can be applied to all of these: the companies, their operations, and the way their employees do their jobs. Using this framework, we can identify at least five different meanings of "convergence" and discuss their implications for different layers of a media company.

Convergence: Ownership

At the highest level of today's media conglomerates, "convergence" means the ownership of multiple content or distribution channels. In the global economy, Viacom, Disney, Vivendi Universal, and AOL Time Warner are frequently used as examples of what has been called ownership convergence.[12] In the United States, Tribune Company, Belo Corporation, and Hearst Corporation are examples of companies—smaller, but still large—that own newspaper, television, Internet, and other media properties. The merger between AOL and Time Warner in 2000 marked a particularly significant event in the annals of ownership convergence. It was, the *Financial Times* of London reported, "the clearest indication to date that the much anticipated coming together of programming of all kinds and the means to deliver it is becoming a reality."[13]

In the eyes of many media critics, ownership convergence raises significant concerns. In 1983, in the first edition of *The Media Monopoly*, journalist and academic Ben H. Bagdikian predicted that "a handful of corporations would control most of what the average American reads, hears and sees." And he worried that the concentration of ownership and control of content by companies with an interest in preserving the status quo would stifle the diversity of voices necessary to produce an accurate "picture of reality" in news coverage.[14] In the United States, long before technology convergence was considered, concern about the concentration of media ownership resulted in FCC rules that limited the cross-ownership of newspapers, television stations, and cable systems. In 2002, the FCC announced the start of a comprehensive review of these restrictions, some of which dated to the 1940s. The restriction that attracted the most attention was a 1975 rule that barred newspapers from owning broadcast stations in the same market (except for cities, like Chicago and Tampa, where joint ownership was already in place). In 2000, with the acquisition of Times Mirror, executives at Tribune Company placed a big bet that this restriction would be eliminated or modified. In acquiring Times Mirror, Tribune owned newspapers and broadcast TV stations in each of the top three U.S. markets: Los Angeles, New York, and Chicago. Their assumption was that by the time the New York and Los Angeles stations' licenses came up for FCC renewal in 2006, they would face no regulatory challenges. "Given the proliferation of media from 1975 to today, this rule doesn't hold water," a Tribune vice president told the *Washington Post*.[15]

It's worth pointing out that ownership convergence does not necessarily require shared editorial decision making or other kinds of collaboration across distribution platforms. In the months after their merger, AOL Time Warner executives were still struggling mightily to figure out how they could get their different media properties to work together more effectively. And Tribune Company owned both a newspaper and a broadcast station in Chicago for decades during which they operated with very little interaction. But as interest in "synergy" grew in corporate executive suites, Tribune increased the amount of cross-promotion and content sharing between print and TV. Tribune executives argued that ownership of television stations by newspapers could improve the quality of TV news. Given that newspapers employ many times the number of journalists that TV stations have, and given the pressure from Wall Street for publicly held companies to deliver ever-increasing profits, there is some merit to the idea of sharing resources. As Jack Fuller, president of Tribune's publishing subsidiary, put it, "Owning television, radio and newspapers in a single market is a way to lower costs, increase efficiencies and provide higher quality news in times of economic duress."[16]

The issues related to ownership convergence get increasingly complicated as more and more information is distributed electronically. Traditionally, newspaper publishers had control over the distribution system for their content, and broadcasters owned (at least for the duration of an FCC license) both content and a broadcast frequency. But as new distribution systems came into being—online services, Internet service providers, cable systems—critics of ownership concentration found a new area for concern. In the new world of electronic distribution, the companies with the closest connection to consumers were not the content creators, but the companies that provided the communications technologies. This was a primary area of focus for Pool in *Technologies of Freedom*, particularly because it was unclear what type of government regulation would apply to these new distribution channels. Would electronically distributed speech be subject to the First Amendment, or would it be subject to the kinds of restrictions imposed on TV and radio as a result of their government licenses?

For those worried about the potential power of the new electronic distributors, a noteworthy event occurred on May 1, 2000. Time Warner Cable, unwilling to meet the Disney Corporation's terms for the right to carry Disney stations, simply pulled the ABC television network from its cable systems. Assailed by outraged consumers, politicians, and federal regulators, Time Warner relented the next day and restored ABC programming. But the incident illustrated a shift in the balance of power between programmers and distributors. "This is a sign of things to come with the AOL/Time Warner merger," a Disney executive told the *Los Angeles Times*.[17]

Convergence: Tactics

Perhaps because of the rise of the World Wide Web, perhaps because of the inexorable fragmentation of the mass media, traditional media companies in the late 1990s began engaging in a variety of activities that I'll call tactical convergence. These activities fell into three general areas: content, marketing, and revenue enhancement.

Just as ownership convergence does not necessarily imply collaboration on tactics, tactical convergence does not require common ownership. In the content and marketing arenas, the most common model was a partnership between a TV station and a newspaper, in most cases (but not all) under separate ownership. In most markets, the primary motivation for—and initial results of—these partnerships seemed to be promotional. The partners assumed that cross-promotion would drive newspaper readers to watch the local news and TV viewers to read the newspaper. The TV viewer would hear about a story in tomorrow's paper. The reader of the newspaper's weather page would come to rely on the station's meteorologists for up-to-date forecasts. In more aggressive markets, especially those where a single company owned both outlets, a common result was "talkbacks"—appearances by print journalists on the air to talk about stories they were covering.

Journalists involved in tactical convergence had a wide range of reactions. At newspapers, some embraced the partnership as a way to increase their audiences. And on the TV side, the newsroom often saw the advantage of adding many more "feet on the street" to report the news (e.g., 225 reporters at the *San Francisco Chronicle*, 16 at the local CBS broadcast affiliate, KPIX[18]). But there were also significant challenges. The first person to raise concerns was often the newspaper's TV critic, who wondered how he or she could be perceived as objective in covering all the stations in the market when the newspaper had a high-profile relationship with just one. There were also cultural stereotypes to overcome. Newspaper staff members saw the TV journalists as shallow and more interested in image than substance. The TV staff saw the print reporters as rumpled, hostile, and unappreciative of the challenges involved in putting together a good broadcast news piece. In both newsrooms, there was reluctance to allow the other to publish an enterprise story first.

Despite these concerns, advocates of tactical convergence argued that it benefited journalists and the public. Forrest Carr, news director of WFLA-TV, one of the partners in Media General convergence effort in Tampa, described seven levels of interaction between his station and the *Tampa Tribune.*[19] Because of their joint ownership and Media General's emphasis on cooperation between the two, his examples of collaboration are more numerous and more pervasive than would be found in partnerships between separately owned companies. But he provided a good list of the kinds of collaboration that are possible in print-TV tactical convergence:

- *Daily tips and information.* Communication occurs through scheduled meetings and spur-of-the-moment conversations between assignment editors from the two newsrooms throughout the day.
- *Spot news.* Newspaper reporters enable the TV station to provide more detail and depth in their live reports from the scene of a news event.
- *Photography.* The TV station's camera crews carry still cameras; newspaper photographers carry digital video cameras. "There's no sense in . . . sending separate photographers to a ribbon-cutting, if all the paper needs is a single shot and all the TV station needs is 25 seconds of video," Carr wrote.
- *Enterprise reporting.* A TV reporter's investigation into bridge corrosion was given to the newspaper to publish first, resulting in a 25 percent ratings increase in that evening's news.
- *Franchises.* This TV term for regularly aired features is now applied to regularly scheduled, cross-platform content. Examples include a newspaper religion reporter who appears on air on the same day her print feature is published, or a TV consumer reporter who writes a column for the paper.

- *Events.* WFLA didn't send a reporter to cover the Winter Olympics, but the Tribune did. So the newspaper's reporter appeared on air nightly with Olympics highlights.
- *Public service.* The paper and TV station cosponsored a town hall meeting about the responsiveness of local news and was planning to collaborate on political campaign coverage.

One noteworthy aspect of Carr's article was its emphasis on TV-newspaper collaboration and the relatively little mention made of the partners' affiliated Web site, TBO.com. In the wake of the collapse of the dot-com boom, this was not uncommon at tactically converged news operations. In some cases, this was because TV stations and newspapers maintained separate Web sites that considered themselves competitors in the online market. But even in markets like Tampa, where TBO.com collaborated with both TV and newspaper, Web sites were increasingly viewed as junior partners—a distribution platform for content created by the other two organizations, rather than a third peer. With staffs pared down because of a decline in online advertising and increased emphasis on balancing revenues with expenses, online operations were ill equipped to supply original content or add unique-to-the-medium elements.

One other area of tactical convergence deserves mention: Efforts to sell advertising packages encompassing multiple platforms. Participants in efforts to sell multiplatform advertising found even greater challenges than their counterparts involved in multiplatform news coverage. For one thing, advertising sales representatives tend to specialize by medium—a TV sales rep understands the strengths of TV and how to sell them to an advertiser—and also to "sell against" the other types of media. In addition, sales representatives are innately possessive of their client relationships and reluctant to collaborate with other salespeople. In addition, in markets with common ownership, there was a realistic concern that joint ad sales would produce less revenue, rather than more, because the advertiser would insist on a lower price for a multiplatform package than for separate ad buys in different media. In the case of online advertising, there were other problems. Print and TV ad sales staffs didn't understand online advertising or how to sell it, and traditional print and TV advertisers were slow to develop interest in online ads. So it took longer to complete an online ad sale. Since online ads cost a fraction of TV and newspaper advertising, many ad sales representatives didn't see a reason to commit much energy to online advertising. Still, big companies were betting that they could generate new revenue by selling ad packages across TV, newspaper, and online. Tribune

Company announced a 2001 goal of $16 million in ad sales by Tribune Media Net, its cross-media team, and in 2002 announced a major cross-platform deal with Target Corporation.[20]

Convergence: Structure

Ownership and tactical convergence don't necessarily require significant changes in organizational structure or the way employees do their jobs. In markets where TV, newspaper or online operations collaborate, it's clear that most staff members focus their energies on the primary medium they work for. But the more aggressive the goals for convergence, the more likely it is that job descriptions and organizational structures will change. Here are a few examples of what could be called structural convergence:

- The *Orlando Sentinel*, which launched a twenty-four-hour local cable news channel in partnership with Time Warner Cable, created a staff of multimedia editors whose job it is to do whatever is necessary to get newspaper content—and print reporters—on the air. The editors, most of whom come from broadcast backgrounds, coordinate between the two newsrooms, arrange talkbacks for print reporters, and produce original TV programming, such as a weekly high school sports show.
- Startribune.com, the Web site of the *Minneapolis Star-Tribune*, hired a TV photographer and producer to serve as an online multimedia reporter. She covers news events, shoots video, takes still photographs, and creates multimedia presentations for the Web site.
- The *Indianapolis Star* and WTHR-TV, the local NBC affiliate, agreed to share the cost of a salary for a director of news partnerships whose job was to foster content collaboration between print and TV. The director, Jon Schwantes, had previously been a reporter and editor at the *Star*.
- In Sarasota, where the *Herald-Tribune* started its own local cable news station in 1995, the newspaper's executive editor also was made responsible for overseeing the TV operation. In 2002, the company created a new position, general manager for electronic media, with operational responsibility for news on the TV station and the paper's Web site. The person who got the job, Lou Ferrara, was formerly city editor for the newspaper.

In a few newsrooms, structural changes can be seen with the naked eye. In Chicago, for instance, a TV stage sits in the middle of the *Tribune* newsroom. In Orlando and Tampa, new assignment desks were built to foster interaction between print, TV, and online editors.

Convergence: Information Gathering

Among journalists discussing convergence, no topic generates more heated debate than whether it is likely or desirable for individual journalists to report a story using multiple media tools. The subject is particularly controversial for print reporters, who don't see themselves carrying video cameras or audio recorders around as they do their jobs. At Columbia University, engineers have developed a mobile journalist workstation, which straps on to a reporter's back and enables him or her to return from a news event with multiple types of content. When I've shown pictures of it to journalists, there are always snickers because it looks so bulky and cumbersome—though obviously, technology advances will ultimately allow such a device to be much smaller and lighter.

In 2002, the idea of the backpack journalist generated strikingly different outlooks in a point-counterpoint pair of articles on the Online Journalism Review Web site. Jane Ellen Stevens, who has worked as a newspaper reporter and video producer for television and online delivery, was proud to call herself a backpack journalist. "These days, can you imagine hiring a reporter who doesn't know how to use a computer?" she wrote. "In 10 years, you won't grok hiring a reporter who can't slide across media, either."[21] (The word *grok* is a literary reference that means, roughly, "consider," "understand," or "contemplate.") As an example, she cites Preston Mendenhall of MSNBC.com, who spent two weeks traveling Afghanistan and sent back written articles, still photos, audio, and video—his work was presented on air and on the Web. The companion article, "The Backpack Journalist Is a 'Mush of Mediocrity,'"[22] quotes journalists who claim that examples like Mendenhall's will be—and should be—rare.

However rare these multimedia reporters may be in the future, it's clear that they increase in number as time goes on. And even if most journalists aren't expected to produce content for every conceivable delivery platform, some are already being asked to gather information in multiple formats. At twenty-four-hour local cable news operations, for instance, it is common to expect journalists to write stories, shoot video, and edit it themselves. This is a sharp contrast from traditional broadcast news stations, where reporting, news photography, and video editing are discrete professions. Or consider the *Topeka Capital-Journal*, where newspaper reporters are routinely expected to tape-record their interviews and bring them back to the newsroom for presentation on the paper's Web site, or the *Orlando Sentinel,* where newspaper photographers also frequently shoot video for their local cable news partner.

Convergence: Presentation (Storytelling)

With every new medium has come a series of conventions for presenting information—or, to put it another way, for telling stories. These conventions take time to evolve. The early TV news broadcasters simply sat behind a desk and read articles that differed little, if at all, from those written for newspapers. But ultimately, TV journalists figured out how to take advantage of their medium's unique capabilities. As we move toward Pool's convergence of modes, it is reasonable to expect that new forms of storytelling will emerge for the three new digital presentation platforms: desktop computers, portable devices, and interactive TV. These platforms have some unique capabilities:

- They have the potential of unlimited space and time, so journalists are no longer constrained by column inches, or pages, or minutes on the air.
- They can allow immediate publishing, as news breaks, independent of press deadlines or programming schedules.
- They can facilitate communication with and among readers and viewers, giving the audience members an unprecedented ability to react to or shape the content, or even to supply content themselves.
- They can deliver content in multiple media formats: text, photographs, graphics, audio, video, and animation.
- Perhaps most importantly, they are interactive, meaning that the user has great control over the content, deciding what to view, in what order, and when to move on to something else.

On the Web, the first new "converged" presentation medium, journalists quickly began to experiment with new storytelling forms. Chicagotribune.com created an innovative presentation that allowed users to get a sense of what it was like to stand in the batter's box facing a hard-throwing young pitcher. The *New York Times* created packages incorporating text, audio, video, and 360-degree panoramic photos. A small paper in Washington State, where the local government was trying to make decisions on waterfront development, created an interactive game allowing citizens to choose the types of developments they wanted. And many news sites experimented with a powerful new storytelling tool: an animated slide show of still photographs, sometimes accompanied by music or recorded sounds.

In the early days of Web journalism, innovative storytelling did not attract much of an audience. Perhaps this was because most of the audience, using slow dial-up connections, couldn't appreciate these stories. Or perhaps it was because Web users were so task-oriented that they didn't want to be distracted by these elaborate interactive presentations. But as time went by and bandwidth increased, news sites began developing sizable audiences for their multimedia storytelling. In March 2002, when part of a scaffold blew off a Chicago skyscraper, killing three people, chicagotribune.com's photo essay got more traffic than the text story about the event. After the terrorist attacks of September 11, 2001, multimedia features were among the most popular content on news Web sites.

As the audience for examples of presentation convergence grows, news organizations will have to figure out how to produce it regularly at reasonable cost. One model might be to create more backpack journalists who can do everything necessary to create an interactive multimedia news story. I think the more likely outcome is greater collaboration among journalist teams. A multimedia producer, using content gathered by reporters, photographers, videographers, and graphic artists, will produce packages for the new digital media.

Convergence: Implications

Technological convergence continues to move forward. Even more significantly, more and more of the media audience is comfortable in a world where information streams in through multiple channels. But as of 2002, convergence in media organizations is clearly most prevalent in its ownership and tactical forms. In selected companies, some new kinds of jobs have been created and new ways of doing things adopted—examples of what I've called structural convergence. Information gathering and storytelling convergence, however, remain relatively uncommon—and, as a result, most journalists' jobs have changed little. The progression from ownership and tactical convergence to information gathering and storytelling convergence will be slow. Ownership and tactical convergence can be implemented without transforming the culture of a media company, though it will probably be more successful the more the culture changes. For information gathering and storytelling convergence to become commonplace, many new kinds of jobs will need to be created, and many existing jobs will require new skills. It may, then, be a good thing for today's media companies that complete technological convergence is not yet upon us. And for journalists who are averse to change, who like journalism the way they have traditionally done it, the relative lack of change is comforting. But it seems safe to predict that greater changes—in the form of new jobs, new job requirements, and new opportunities—lie ahead. For individual journalists, the companies that employ them, and the colleges and universities preparing the next generation, the present and future of convergence have significant implications. At a minimum, all journalists will need to develop a basic understanding of the unique capabilities of the different communications media. Increasingly, their employers are going to deliver content to multiple platforms or collaborate with other companies to do so. No longer can journalists assume that just because they work in one medium (say, a print newspaper), they don't need to worry about how their story should be presented in another (on TV or the Web). No longer can journalism school faculty assume that they can turn out graduates who understand only one set of communications tools. On the other hand, we are not necessarily moving into an era when a single journalist needs to do it all—report, write, take pictures, shoot and edit video, and present their stories on the Web. There will always be a need for specialists who do one thing particularly well. But in the converged media organizations of the future, the journalists who best understand the unique capabilities of multiple media will be the ones who are most successful, drive the greatest innovations, and become the leaders of tomorrow.

Notes

1. "Convergence, *n*," *Oxford English Dictionary*, J. A. Simpson and E. S. C. Weiner, eds. (Oxford: Clarendon Press, 1989).

2. David E. Carlson, "David Carlson's Online Timeline," at http://iml.jou.ufl.edu/carlson/professional/new_media/timeline.htm, accessed September 12, 2002.

3. Ithiel de Sola Pool, *Technologies of Freedom* (Cambridge, Mass.: The Belknap Press of Harvard University Press, 1983), 27–28.

4. Pool, 1–2.

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