

NEWS AND INFORMATION AS DIGITAL MEDIA COME OF AGE

By Persephone Miel and Robert Faris

Overview 2008

MEDIA
RE:PUBLIC



Berkman

The Berkman Center for Internet & Society
at Harvard University

NEWS AND INFORMATION AS DIGITAL MEDIA COME OF AGE

ACKNOWLEDGMENTS

The past year has been an amazing learning process and a wonderful collaboration with far too many people to thank properly. The Berkman community of fellows, staff, and affiliates is an inspiring place to work. I am especially grateful to John Palfrey, for his patient and insightful guidance; Colin Maclay, for his excellent questions and unusual metaphors; and my co-author Rob Faris, for his patience and perseverance in getting it right. John Bracken and Elspeth Revere of the MacArthur Foundation were much more than sponsors—their thoughtful perspective and their passion for these issues informed and inspired the work. They were instrumental in helping to gather more than 100 remarkable people at USC Annenberg in March 2008 for the Media Re:public forum. A special thank you to everyone involved, whether you presented, moderated, listened, tweeted, blogged, or negotiated with the caterers and booked plane tickets (special thanks to Catherine Bracy, for that and everything else that you make look so easy, and to Carey Andersen, for her cheerful help with everything).

The research and this paper were much improved by the thoughtful critiques and expert advice of many generous and smart people within and without Berkman, including: David Ardia, Pat Aufderheide, Charlie Beckett, Josh Benton, Sasha Costanza-Chock, Jessica Clark, Carol Darr, Melanie Dulong de Rosnay, Bruce Etling, Dan Gillmor, Christine Gorman, Jon Greenberg, Eszter Hargittai, Andrew Heyward, Keith Hopper, Ellen Hume, Colleen Kaman, Beth Kolko, Dori Maynard, Ann Olson, Geneva Overholser, Jan Schaffer, Stephen Schultze, Doc Searls, Wendy Seltzer, Jake Shapiro, Ivan Sigal, Tom Stites, Lokman Tsui, David Weinberger, Lisa Williams, Ernest Wilson III, and Ethan Zuckerman. Thanks to all my research assistants, but especially Khadija, Dan, and Matt, who worked harder and more cheerfully than could be imagined. I am also indebted to the dozens of media professionals, technologists, and researchers for the interviews and conversations both formal and informal that shaped and challenged my thinking.

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Cambridge, Massachusetts, December 2008

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EXECUTIVE SUMMARY

Every day, more people turn to the Internet as a primary source of news: reading blogs, visiting aggregators and online news sites, watching video clips, listening to podcasts, and opening links in emails from friends. Members of this growing audience are not only consumers of the news—many are shaping the news agenda for themselves and others: selecting, combining, and commenting on stories as well as creating their own. The United States is now several years into what promises to be a transformation of the media. It is driven by the rapid expansion of the number of people and organizations newly engaged as authors, editors, and publishers. In the United States and other developed countries, this expansion is occurring in tandem with serious contractions in the traditional news media. This paper explores the impact of the remarkable array of new media structures that have arisen to take advantage of these new opportunities and evaluates the problems and limitations associated with these changes.

In seeking to understand the contours of the still-evolving news and information media environment in 2008 and the role of participatory media in it, *Media Re:public* begins from the following premises:

- Public participation in the media, enabled by the Internet, is a burgeoning and evolving phenomenon that has both positive and negative effects.
- Dramatic changes in the traditional news media are occurring in parallel to the rise in participation, primarily due to the disruption of their business models by new distribution systems.
- Simple dichotomies—new vs. old, mainstream media vs. blogosphere—do not accurately describe the current environment, with its complex interdependencies among media entities with different structures and motivations. The distinctions between professional and amateur are blurring, and the definitions of commercial, public, and community media are shifting.

Understanding these trends requires a broader and more holistic view of the media environment than isolating *new* or *participatory* media, terms that are losing value as meaningful distinctions. Through this lens, *Media Re:public* seeks to identify areas in which the media environment is succeeding

in providing the public with accurate and complete news and information and areas in which there has been less success. Rather than seeking to recreate some mythical point in the past at which news media functioned perfectly, we instead aim to identify areas where core journalism functions in a democracy are at stake and where there is potential for the networked digital media environment to offer something richer and more representative than anything previously available.

Key Issues

Six challenges stand out among the numerous obstacles to achieving this best possible news media environment:

Under pressure from falling revenues and the disruption of their business model, traditional media outlets are reducing and shifting the scope of their original reporting.

Newspapers in particular are cutting resources devoted to costly and less commercially viable news: international coverage, specialized beats like science and education, and some types of long-form, in-depth journalism. Noncommercial media are not immune; public broadcasters are struggling with the implications of converging technology and fragmented audiences for both underwriting and individual donations.

Web-native media entities are not addressing all of the crucial reporting gaps left by traditional media. Current structures and mechanisms do not provide sufficient incentives for them to do so.

Although many thematic and geographic areas are being well served by combinations of participatory and professional online media, many others are not. The motivations that inspire participatory media entities and the resources that they attract have produced organizations that are not designed to identify and address all the gaps left by traditional media structures.

In the changing media environment, news consumers risk relying on news sources that are neither credible nor comprehensive.

The abundance of media sources online offers the public many new choices. But these choices, including new options for navigating the traditional media online,

count on the audience to locate and assess the quality of accurate and salient reporting in order to assemble a coherent news product. Research shows that many are ill-equipped for these tasks.¹ In contrast, motivated and technically adept users can now access an unprecedented breadth and depth of information while benefiting from the recommendations of their similarly advantaged peers. The possible effects of these disparities are just beginning to be understood.

Participation in the online media space is not evenly distributed; some populations and ideas remain underrepresented.

Many groups have gained a voice thanks to participatory media, but many others do not participate online or participate in online communities that remain walled off, with their concerns not reflected in the general media space. The potential to use new technologies to improve on traditional inequalities is not being fully realized, which has consequences not only for the media consumption of marginalized communities, but also for their representation in the broader public sphere. As journalists increasingly rely on online sources, populations or ideas that are absent from the online space may as well be invisible.

There are elements of critically important journalism that have not yet found reliable sustainability models in the online media environment.

Many traditional news media entities will survive the upheavals to their business, even as many Web-native media enterprises will grow and thrive. However, there is no guarantee that either commercial or volunteer ventures will find it attractive to undertake certain resource-intensive types of journalism, particularly on topics for which there is not broad public demand.

Efforts to understand and address these issues are limited by a lack of solid empirical evidence, and must rely instead on incomplete information, anecdotes, and intuition.

We know far too little about how changes in the delivery and consumption of news are affecting public awareness, opinion, and civic engagement. The ability to quantitatively measure activity and content available on the Internet may obscure both the importance of how audiences combine offline and online media sources and

the examination of what information may be absent from the online space. It is also crucial to consider how the information needs of the millions of Americans who will begin or increase their use of online media in the coming years may differ from those of early adopters.

Possible Responses

In the course of this study, we have identified four broad areas where we believe efforts to address the challenges posed by these issues should be focused. These efforts require new coalitions of people and organizations working to promote media in the public interest:

- Promoting excellence in journalism and ensuring that these efforts are using the best technical, financial, and managerial tools and techniques available
- Serving publics with demonstrated information deficits, thus increasing the salience, quality, and scope of information that is reaching them
- Monitoring and addressing areas in which the supply of original reporting on important issues is inadequate in quantity, quality, or balance
- Measuring the real-world impact of the shifting news media environment on public attitudes and knowledge

It should be noted that the following responses do not include specific fixes for the ongoing financial challenges to the media environment. Instead, we offer responses that account for this uncertain financial context:

Strengthen emerging journalism organizations and related support groups by consolidating collective expertise and supporting common operational resources.

Hundreds of small public service media projects working in isolation could increase their effectiveness and their ability to survive if they were better able to tap into know-how extant in successful news organizations of all kinds, including work being done outside the United States. Modest investments in collective knowledge networks and shared, media-specific systems to support small organizations could have huge payoffs in the propagation of successful models, including innovative experiments by traditional media.

Prioritize investment in tools and institutions that build bridges between information and publics.

New tools make it easy to create digital media, but ensuring that content reaches the public that needs it is an ongoing challenge. Various intermediaries that can create ways to reach populations that lack the time, motivation, or skills to participate in actively shaping their own news agenda could have an enormous effect on the reach and effectiveness of public interest media: in effect, bringing the news to the people. New forms of “editorial intelligence” are needed to help bring useful information to publics who need it.² This work would complement but not replace critical digital news literacy education.

Focus public service journalism on critical areas that are currently underreported.

To address reporting gaps on significant societal issues that are emerging in the evolving media landscape, a process of auditing media could assess coverage and gaps in reporting for specific geographic and thematic areas. Stakeholders representing specific publics could use these to formulate a long-term approach to ensure that gaps in coverage are filled. Innovative efforts will follow the lead of projects like [Global Voices](#), [WITNESS](#), and [Circle of Blue](#) to realize possibilities for creating content that were inconceivable in a traditional environment.³ Many different models are needed to commission, organize, and finance such reporting initiatives.

Invest in research and monitoring to develop a deeper and more nuanced understanding of how the media environment is changing.

As the importance of online news grows, it is essential that those engaged in journalism projects gain a better understanding of how people locate, select, and understand online information, particularly new audiences that are now entering the space. Coordinated, long-term research should be designed to help media in the public interest compete against better-financed, commercially driven media. It is also critical to map the shifts in resources that support journalism, from training to legal defense and technology, as traditional media and related organizations like journalism schools undergo major transformations.

KEY TERMS

For the purposes of this paper, we are using the following definitions of terms:

LEGACY MEDIA—media originally distributed using a pre-Internet medium (print, radio, television), and media companies whose original business was in pre-Internet media, regardless of how much of their content is now available online

WEB-NATIVE MEDIA—media formats that exist only on the Internet and media entities whose first distribution channel is the Internet.⁴

PARTICIPATORY MEDIA—media formats or entities where the participation or editorial contributions of people whose primary role in life or in relation to the specific media entity⁵ is something other than media producer—Jay Rosen’s “people formerly known as the audience”—are viewed as central. Pre-Internet participatory media forms include letters to the editor, community access cable TV, radio call-in shows, and so on.

NEWS—simply and elegantly defined by sociologist and communication scholar Michael Schudson as: “information and commentary on public affairs taken to be publicly important.”⁵ News may be thought of as comprising information, such as stock prices; reporting, where information and/or observations are brought together into a news item; and analysis, including all manner of commentary or deliberation on the topics at hand.

JOURNALISM—any activity that creates news, though not everyone who creates news is necessarily a journalist.

BACKGROUND

You don't own the eyeballs. You don't own the press, which is now divided into pro and amateur zones. You don't control production on the new platform, which isn't one-way. There's a new balance of power between you and us.

The people formerly known as the audience are simply the public made realer, less fictional, more able, and less predictable. You should welcome that, media people. But whether you do or not we want you to know we're here.
—Jay Rosen⁷

When Jay Rosen wrote those words in 2006, citizen journalism was a hot topic. The democratizing impact of ordinary people taking charge of the news agenda was expected to continue to expand, even explode, at the same exponential rate of growth expected of the Internet. The old media would adapt by taking the best from the new or would deservedly lose their relevance.

In 2008, the most optimistic observers still see in the rise of blogs and other forms of amateur online media the basis of an unstoppable democratic revolution. In their vision, empowered citizens are seizing control of the political agenda from the corporate handmaidens of mainstream media, forcing the powers-that-be to listen to the true voice of the people. Vigorous debate—now open to all—allows unprecedented levels of participation. Errors and lies by politicians, corporations, and irresponsible media are corrected quickly by the scrutiny of the crowd. Authentic stories about the lives of real people are part of a richer, more human information space. Easy and cheap multimedia production and remixing tools bring fresh new voices to light. The Internet connects us to people and ideas from around the world that we would never have encountered in the past.

This rosy view stands in sharp contrast to the “cyberdystopians.” Now, as in 2006, less sanguine observers see in the changing media space a lowering of standards, the loss of national cohesiveness, the disappearance of the authoritative voice of the professional media. They see political mudslinging run rampant, corporate marketers with free rein to spread half-truths about their products and those of their competitors, and unfounded rumors achieving the status of headlines. Political divisions grow more extreme as people

see only news that reinforces their own point of view. The manipulation of the blogosphere—and hence public opinion—is the newest dark art. A deluge of meaningless, self-centered chatter drowns out rare glimmers of online insight or truth. The prevalence of semi-literate online discourse and amateur media degrades the very idea of culture.

Both the optimists and the pessimists are right.

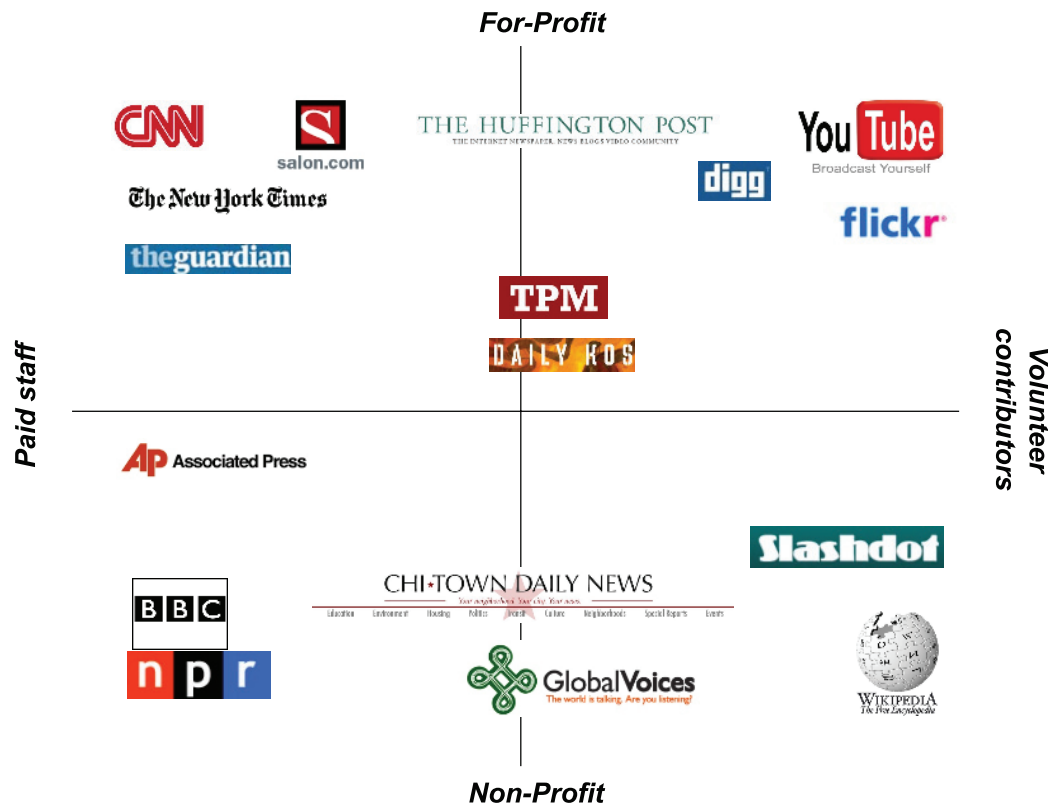
The Internet is reinventing the media environment, which in turn is changing politics and society, for better and for worse. Some innovations have succeeded beyond their creators' imagination, while the growth predicted in other areas has been lower than expected. The most dire predictions about the imminent collapse of professional journalism have failed to materialize, but negative effects that no one predicted have also occurred, including within the experiments of legacy media. The efforts of traditional media companies large and small to adapt to the new environment, particularly in the last couple of years, have been more extensive and changed the landscape more than most people expected.

The Structural Transformation of Media

The digital media age has brought fundamental changes to the ways by which news and information are created, disseminated, and consumed in the United States and around the world. New tools and platforms have allowed people who are not traditional communications professionals to take part in a decade of explosive growth in online media. Ordinary people share their writing, photos, audio, and video with a potentially global audience in formats sometimes indistinguishable from those used by professional media (see Figure 1 for an illustration of new and old media business models). Blogs, which now constitute one of many possible forms of participatory media, are read by an estimated 60 to 90 million Americans.⁸ The resulting changes are being felt in political life, as public figures realize that when anyone can be a reporter, nothing is ever really “off the record.” In commerce, both small businesses and global brands are realizing that online engagement with their customers is critical.⁹

Networked digital media bypass traditional media distribution systems, making it possible to instantaneously distribute content—original, excerpted, and copied—across the

Figure 1. The explosion of amateur online content has created new media business models.



globe for a tiny fraction of the cost of printing or broadcasting. These changes have also transformed the intellectual property landscape, as Wendy Seltzer summarizes in the sidebar titled “Digital Media and Copyright Protection—A New Era.” On the Internet,¹⁰ anyone can be an editor, publisher, or broadcaster; the number of individuals and groups who are taking advantage of this freedom is startling. In the United States alone, it is estimated that more than 20 million people have written a blog post at least once.¹¹

For traditional media, these changes in the ease and speed of media production translate into a loss of what was formerly a near-monopoly. However, it is the loss of control over the format and timing of the distribution of information that poses the true challenge to the traditional media. As David Weinberger and others have explained, the value created by traditional media models is based on scarcity, but the Internet supports an environment of information abundance.¹² Audiences are able to access the same professionally produced news, information, and entertainment that they previously obtained from traditional media, but on their own terms. They

no longer have to pay for the newspaper or wait for the news to be broadcast. Furthermore, they are able to separate stories from the advertising sold by the publisher or broadcaster. This disaggregation of content and advertising is the true threat to the traditional media industries, not the popularity of amateur content like blogs.

All Media Are in Transition

These digital challenges to the traditional limited-access business model affect all media, not just news. One of the earliest warning bells was the shakeup in the music industry, and the fear of meeting a similar fate underlies many of the decisions made by news media executives today. All traditional media organizations, including public broadcasters, are re-examining the way their work reaches its audience and the impact of these new pathways on their business models. Not one of the traditional media industries has confidently identified its future revenue model.

DIGITAL MEDIA AND COPYRIGHT PROTECTION—A NEW ERA

The rise of digital networked communications changes the copyright landscape as new modes of creative expression and information exchange challenge both the rationale and operation of copyright law. Several factors set the scene for new copyright clashes, including powerful end-user tools for media creation, the ease of copying digital content, cheap networked distribution, and increased dependence on network intermediaries. Media incumbents feel threatened by new forms of cultural communication, user-generated content, and the communities that have formed around them. Many turn to copyright for a remedy, as it now reaches further than ever, as every digital conversation involves “copies.” Copyright fights have played out on several fronts:

PIRACY. Cheap copying and distribution create opportunities for wholesale unauthorized copying of movies, music, books, and even news articles. News organizations may find their stories republished not only by amateur individual bloggers and commentators but by fake “robo-blogs,” created solely to generate advertising revenue from others’ content. Media and entertainment companies have responded with legal threats and lawsuits aimed at end-users, Internet hosts and connection providers, and the developers of file-sharing software. Members of the Recording Industry Association of America (RIAA) have threatened more than 30,000 individuals for music sharing, extracting settlements from most of them with threats of outsized damage awards. Yet even litigation has not significantly diminished the level of copyright infringement. Entertainment companies have been successful at reducing demand for piracy by making content more

easily available, selling single music tracks in online stores like the iTunes Store and Amazon, or offering television shows free on advertising-supported portals such as Hulu.com.

COPYRIGHT PROTECTION. The 1998 Digital Millennium Copyright Act (DMCA) gave legal force to technological copy-control and access-control measures, blocking their circumvention or the development of circumvention tools. This measure too has failed to slow piracy, but has limited development of noninfringing tools and uses of media, frustrating users of restricted media, such as media educators seeking to use clips from encrypted DVDs.

REMIX. As many of the “former audience” create their own online content, they may incorporate pre-existing works: a political commentator uses clips of candidates’ TV interviews; a writer quotes from news coverage to discuss its biases. Copyright’s fair use exception permits some copying without the permission of the copyright owner, specifically including uses for criticism, commentary, or news reporting. But some copyright holders are quick on the trigger, sending cease-and-desist demands whenever they see their material reused. Internet hosts, encouraged by the safe-harbor provisions of the DMCA,¹³ generally remove the questioned material, even when its quotation would be deemed fair use.

SHARING. Many creators are motivated by nonmonetary incentives to share their work, and therefore do not want copyright’s default “all rights reserved” exclusion. Creative Commons licenses enable creators to choose more generous terms, such as “attribution

share-alike,” or “attribution noncommercial,” simultaneously marking the works with machine-readable license terms that help others to find and reuse the works.

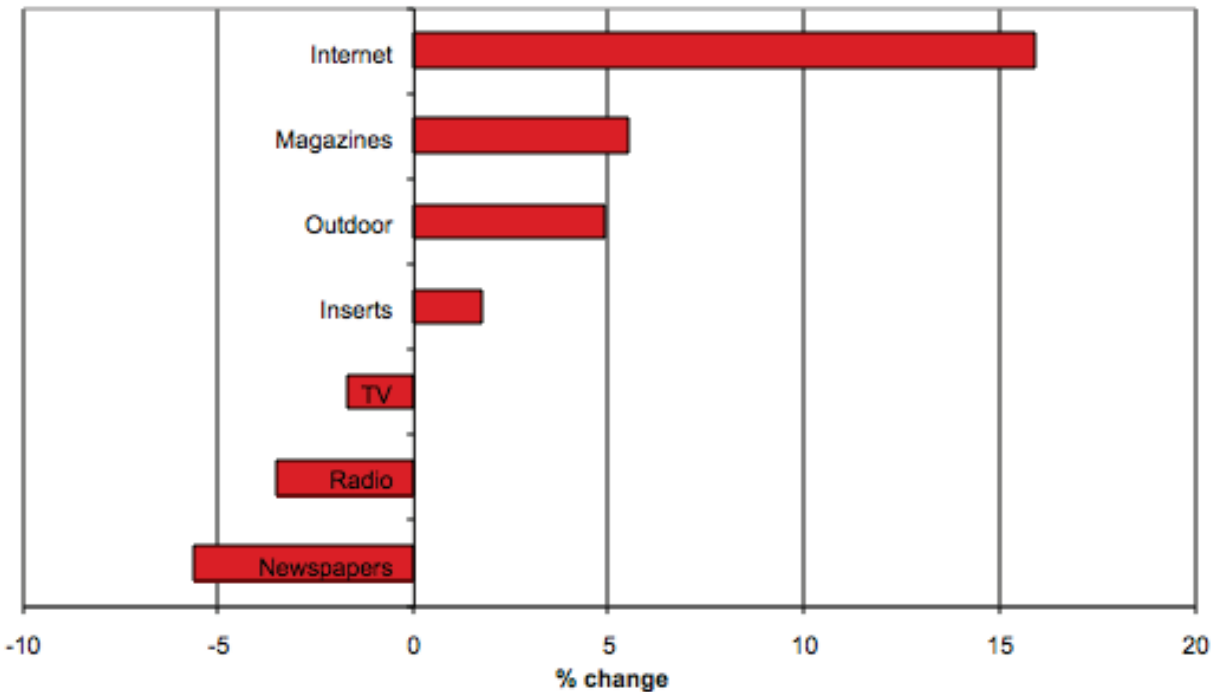
REUSE. The ease of copying and distributing digital works contrasts with the difficulty of identifying the copyright holder and negotiating rights for use of copyrighted works. Particularly with extended copyright terms, many works are copyright “orphans”—inaccessible because there is no one to give permission for their use. Proposed legislation to limit the liability of those who made good faith efforts to find copyrights holders before reusing their works failed in the last days of the 110th Congress, but may be reintroduced.

ISP LIABILITY. The Internet Service Providers (ISPs) who are necessary conduits and hosts for online communication are being enlisted in the copyright wars, often against their will; for example, through DMCA takedown demands. As potential chokepoints, they are being asked to monitor and limit their users’ communications, notably on college campuses. A new higher education bill requires institutions to explore technological measures to limit copyright infringement on campus networks.

For more information, see the work of organizations including Electronic Frontier Foundation, Chilling Effects, Creative Commons, Free Software Foundation, and Public Knowledge.¹⁴

Intellectual property lawyer and scholar Wendy Seltzer is the founder of Chilling Effects and a fellow at the Berkman Center.

Figure 2. Change in ad revenue by medium, 2006 to 2007.



Source: Data from Media Life Magazine¹⁵

Every pre-Internet medium is confronting the challenge of reinventing itself for the online space, but each approaches the problem from a different starting point; the timeline and the economics vary tremendously from industry to industry. For example, magazines, an attractive format not readily replaced by the Internet, are losing readers and advertising dollars much more slowly than newspapers. Commercial radio, available in places where the Internet is not, is also losing advertising only gradually (see Figure 2 for the relative changes in advertising revenue of different media). The massive broadcast television industry, which has retained its dominant position as an entertainment and advertising medium despite the challenges of cable, home video, and digital video recorders like TiVo, has extensive resources available to test and promote new formats.¹⁶ Cable television's agile and competitive corporate culture, comparatively low-cost structure, and 24/7 mindset may help in adapting to new platforms quickly. Public TV and radio, like other broadcast media, are losing audiences more slowly than newspapers and are working hard to adapt their content and their funding systems for online audiences. However, the unique organizational and funding structure of the U.S. public broadcasting system poses obstacles to effective, systemic change.¹⁷

WHO BLOGS?

The most salient characteristic of U.S. bloggers is their youth. More than half (54%) of bloggers are under the age of 30. Like the Internet user population in general, bloggers are evenly divided between men and women, and more than half live in the suburbs. Another third live in urban areas, and a scant 13% live in rural regions. Contrary to common perceptions, bloggers are less likely to be white than the general Internet-using population: 60% percent of American bloggers are white, 11% are African-American, 19% are English-speaking Hispanic, and 10% identify as some other race. By contrast, 74% of U.S. Internet users are white, 9% are African-American, 11% are English-speaking Hispanic, and 6% identify as some other race.

Source: Pew Internet & American Life Project¹⁸

The Special Position of Newspapers

With good reason, the precarious fate of newspapers is the focus of most discussions about the future of news in the digital age. General-interest daily newspapers are in the most trouble, losing readers of their paper editions and advertising revenues faster than any other news medium and laying off significant numbers of journalists and other editorial personnel.¹⁹

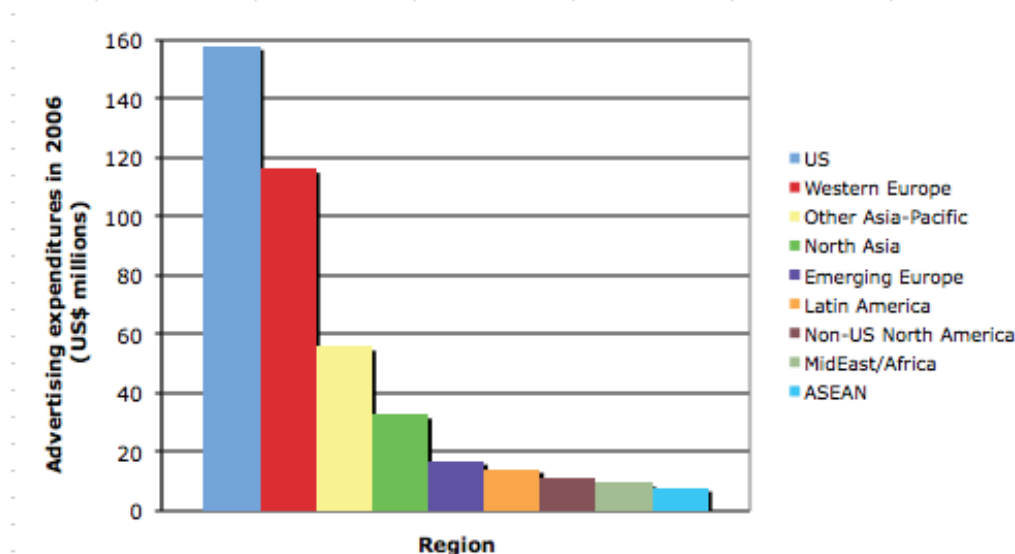
Threats to newspapers are threats to core functions of journalism. Newspapers are the most news-centric of the traditional media: timely information on current events is the core of their product. This contrasts sharply with broadcast media, in which entertainment is primary and coverage of news and current affairs represents only a small fraction of the activity across the industry as a whole. In contrast, coverage of current events by newspapers is both broad and deep; they generate more original reporting and more in-depth coverage of individual stories than broadcast news, whose audience will change the channel instead of just turning the page when they have had enough of a story. Cutbacks in reporting by newspapers resonate throughout other media—especially radio, whose newsrooms rely heavily on their reporting.

The Unique and Fragile American Media Model

The effect of market forces in shaping the U.S. news and information environment is staggering and cannot be compared with any other country in the world (see Figure 3). For-profit media enterprises have long dominated the news industry, supported not only by their roughly \$150 billion media advertising market,²⁰ but also by the phenomenal global market for American-produced entertainment, which is a significant part of the television economy. A combination of history, professional tradition, and regulation created a media model in which commercial companies were expected to serve the public need for quality information while simultaneously creating value for advertisers and profit for their owners. The traditional wall between the newsroom and the sales group was meant to ensure that these two often contradictory goals could coexist.

Public broadcasters in the United States play a much smaller role in determining the national news agenda compared to their counterparts in other countries and face very different challenges to their survival. Although they are not beholden to shareholders and thus in theory are less driven by the need to reach mass consumer audiences, their

Figure 3. The U.S. market dominates media advertising spending



Source: GroupM²¹

reliance on individual donors and corporate underwriting and the intense political scrutiny of their government funding combine to discourage risk-taking and favor programming that draws large and affluent audiences of potential donors. As they work to understand their future in the online space, public radio and TV stations and the national organizations that connect them have launched many valuable experiments to engage online audiences and use digital tools to enhance reporting and expand formats. But the structure and culture of the public broadcasting system makes it unlikely that they will address the reporting gaps left by commercial media.²²

Observers of the news media have worried for some years that the shift in ownership of newspapers and local broadcasters from privately held businesses—often family-run—to large public companies demanding large profit margins has eroded editorial independence and excellence. In the new environment, the situation is exacerbated. When the popularity of disaggregated pieces of content is measurable, editors with shrinking budgets are relentlessly pushed towards the most popular content.

Forced to focus on economic survival, newspapers and other traditional news media may no longer have the luxury of maintaining their commitment to public service, a journalistic mission accurately portrayed as extremely resource-intensive. As a result, despite a period of widening globalization, U.S. newspapers and other traditional media are doing a poor job of informing citizens on world events. Cutbacks are weakening the media's traditional role as watchdog, and coverage of serious social issues such as education, health care, and

poverty is decreasing. As newsrooms shrink, the Project for Excellence in Journalism study despairs that “the ambition of newspapers to cover their regions or even basic government functions in nearby exurban towns is on a sharp decline.”²³ Editors are finding the age-old struggle to insulate editorial decisions from commercial imperatives to retain and attract advertisers ever more challenging. According to *The State of the News Media 2008*:

A comprehensive audit of coverage shows that in 2007, two overriding stories—the war in Iraq and the 2008 presidential campaign—filled more than a quarter of the newshole . . . consider the list of the domestic issues that each filled less than a single percent of the newshole: education, race, religion, transportation, the legal system, housing, drug trafficking, gun control, welfare, Social Security, aging, labor, abortion, and more.²⁴

The aim of this paper is to examine the interplay between the challenges to the models that have traditionally supported the bulk of journalism in the United States and the many new models enabled by the Internet for the creation, distribution, and funding of all types of news, reporting, and commentary. In the United States, where the dominant news media are commercial, the speed and extent of these developments represent a challenge that is qualitatively different from earlier technological changes. The basic trends are similar worldwide, but are unfolding very differently in countries with stronger public media, lower Internet penetration, and different patterns of mobile technology use than the United States. These differences may offer many valuable lessons for U.S. media.²⁵

A TYPOLOGY OF MEDIA ORGANIZATIONS

PUBLISHER—carries out original reporting, editing, publishing, and distribution/broadcasting. *Examples: New York Times, Salon.com, CBS Evening News*

NEWS AGENCY—focuses on news-gathering for publication and distribution by others. *Examples: Reuters, Associated Press, Bloomberg, Statehouse News Service*

AGGREGATOR—news distributor/publisher that relies on third-party content. *Examples: Google News, Yahoo! News*²⁶

AUTHOR-CENTRIC—content and usually distribution are controlled by authors rather than institutions. *Examples: Instapundit.com, Baristanet, Drudgereport, BoingBoing*²⁷

AUDIENCE-DRIVEN—relies primarily on the contributions of the audience for content and/or editorial decisions. *Examples: YouTube, iReport, Slashdot*²⁸

DIGITAL MEDIA IN PRACTICE

Big media all talk about citizen journalism and it's become a marketing tool; you have to be talking about citizen journalism, you have to be responding to your audience.

—Richard Sambrook²⁹

With the proliferation of new formats and roles, it is easy to perceive the online media environment as a chaotic free-for-all: everyone is potentially a journalist or a commentator, the audience could be an unpredictable collection of casual Googlers or an intensely active but closed community, and computer programs choose the top news stories of the day. But even in this fluid environment, there are several distinct media structures that can be distinguished.

We posit five basic types of media structures based on the distribution of the functions of authors, audience, and editors.³⁰ Two of these media types, the *publisher* and *news agency*, represent online and offline variations of legacy media structures. The publisher unites all functions under one enterprise: reporting, editing, packaging, and delivering the news to a specific audience. The news agency performs the same news-gathering and editing functions, but acts as a news wholesaler, selling the resulting stories to media outlets that package and distribute it, rather than seeking its own audience.

The other three media types we describe—*aggregator*, *author-centric*, and *audience-driven*—have no real parallels in pre-Internet media. Online aggregators recreate the functions of a publication like *Reader's Digest*, collecting and arranging materials produced by others. But online, where the editors may be any combination of human staff, computer algorithms, and the audience itself, aggregators can publish an infinite number of virtual publications or programs—a new one for every audience member, every few minutes. The author-centric category represents the independent authors like bloggers who are using the distribution possibilities of the Internet to identify an audience outside of the confines of a larger media organization. Finally, audience-driven models owe their existence to the nature of the network; the contributions of their distributed online audience as authors or editors are critical to the formation of their content.

Just as many Web-native media take the traditional structures described previously as their model, legacy media companies are adopting and adapting the new structures as they develop their online properties. In this section, we

examine the characteristics of current practice across all forms of media, with the aim of highlighting areas where new tools and models might have unrealized potential to improve the quality of journalism as it is produced or consumed. We look in turn at the ways that the roles of authors, audiences, and the overlapping roles of editors and publishers are changing.

New Authors, New Tools, New Formats

Your increasingly obsolete information industries would perpetuate themselves by proposing laws, in America and elsewhere, that claim to own speech itself throughout the world. These laws would declare ideas to be another industrial product, no more noble than pig iron. In our world, whatever the human mind may create can be reproduced and distributed infinitely at no cost. The global conveyance of thought no longer requires your factories to accomplish.

—John Perry Barlow³¹

The foundation of the participatory media revolution is that all people, not just those selected by an official system of some kind, have access to the means to publish and broadcast. In the news and information sphere, the former audience is making use of this ability in many ways, from commenting on a story on the site of their local TV station to blogging based on original research and reporting. Audience-contributed content can be divided roughly into the following categories, in ascending order of commitment typically required from the author:

- Comments, critiques, and conversations—responses to existing media, discussion forums
- Reviews, features and soft news—original contributions based on personal experiences of the author or focused on topics such as arts, culture, consumer products, or community events
- Opinion and analysis—commentary, analysis, or summaries of current topics and events, drawing on media sources and/or personal experience
- Reporting—original, fact-based accounts of events (*spot news*, in legacy media terms) or situations (*enterprise reporting*) that have some civic significance, usually with an element of time sensitivity

Comments, Critiques, and Conversation

(A)s we've seen so clearly in the last year or so, consumers will want to use the two-way nature of the Internet to become active participants themselves in the exchange of news and ideas. The news, as "lecture," is giving way to the news as a "conversation."
—Tom Curley³²

A hallmark of Web-native media is the participation it invites from the audience. Participating in the conversation—instantly voicing reactions, additions, or corrections to stories—is a huge part of the appeal of blogs and Web-native media and was what initially distinguished them from traditional media.

This participation is no longer restricted to chat rooms and blogs. Legacy media have adopted these practices and are increasingly inviting their audiences to respond to stories, discuss the news, and issue corrections using a variety of media, including text messaging, email, audio recordings, and video clips. These contributions may be incorporated into radio and TV broadcasts as well as online publications. However, the enthusiasm within media for drawing user feedback into the editorial process is not uniform. Some have wholeheartedly embraced the practice, while others have been at best reluctant experimenters. But even those within legacy media who doubt that the public has anything valuable to add realize that the audience's right to express opinions about news coverage easily and without delay is not a fleeting fad.

Incorporating participatory media practices into legacy media organizations is not without its challenges. Avoiding the pitfalls of commercial spam and the obscene, violent, vicious, or merely insipid conversations that can coarsen or disrupt online discussions is a serious issue in the context of the large user base of legacy media sites. Moreover, it is dangerously easy to misinterpret the extent to which the commenters are representative of the audience. As BBC newsroom head Peter Horrocks notes, less than 1% of the company's vast online audience submits a comment of any kind even on the biggest news days:

The BBC gets an average of 10,000 e-mails or posts in a day to its Have Your Say site. That can soar on big news days. That sounds an enormous number. But up to 5 million people can come to the BBC News website on a single day. That means that less than 1% of our users, even on the most

active days, are choosing to say something to us. What organization—a political party, a business, a trades union—would allow its stance to be totally driven by such a small minority?³³

For legacy media, audience comments and discussion forums have several possible functions, many of them unrelated to editorial considerations:

- Comments are popular interactive features that attract or keep audiences, on a par with news quizzes, online polls, contests, and so on.
- Audience contributions are an inexpensive source of complementary content that can extend the shelf life of original materials, increasingly important in the search for low-cost ways to expand the volume of online advertising, which is priced so much lower than print or broadcast.
- Audience feedback is an indicator of popularity of specific stories or genres that is useful for targeting audiences and advertisers.
- Drawing audiences into the conversation can generate substantive feedback on editorial priorities or practice, correct errors, suggest new topics or sources, and offer the original authors valuable insight into their audiences and the opportunity to have a conversation with them.

Citizen media advocates have focused on the fourth function in this list; that is, urging legacy media toward greater responsiveness and accountability and promoting the idea that interaction with the audience will improve journalism. Journalists in popular legacy media respond—justifiably—that the enormous volume of comments received by mass-audience media and the generally low level of discourse make it nearly impossible to follow and respond meaningfully to audience reaction.

For managers, especially of advertising-supported media, the popularity of audience-generated comments and discussions and their ability to reach and hold the attention of audiences are reason enough to invest in these features. Despite some concern about advertisers' willingness to have their messages associated with audience-contributed content, newspaper publishers are actively researching the possibilities of context-sensitive advertising, in which the content of

audience discussions would trigger ads targeted at readers' presumed interests.³⁴

At the management level, fully incorporating public comment into the editorial process is not seen as clearly tied to audience growth and few legacy media companies have committed the resources and the effort needed to change newsroom culture. There are notable exceptions, however.

Global media giants BBC and CNN offer two examples of the potential and the limits of user input as regular sources of content for traditional media products. Each has developed systems that reflect their need to preserve the reputation of their news brand. With two dozen staffers dedicated to managing audience contributions of all kinds, the BBC is able to incorporate select real-time reactions from audiences around the world into live radio broadcasts in ways that add journalistic richness, while also fostering substantive discussions on moderated comments forums.

WHO PARTICIPATES IN PARTICIPATORY MEDIA?

More than a third of online adults create content online, and 57% of teenagers aged 12–17 make their own content to post to the Web. Younger users and home broadband users are the most avid content creators, and most post their creations online to express themselves creatively and to share their experiences with others. *Source: Pew Internet & American Life Project*³⁵

CNN's iReport site³⁶ takes a different approach, welcoming unmoderated comments from viewers, including video submissions, on issues of their own choosing as well as on topics suggested by CNN producers. These unmoderated conversations serve an online community on a separate site, where they may be accessed by CNN staff and selectively incorporated into CNN's online and broadcast platforms, reaching a much larger audience.

Despite the successful integration of audience input into traditional editorial systems in both cases, there is little doubt that the value for large media conglomerates of these resource-intensive projects has as least as much to do with reinforcing brand loyalty as with improving the news product. For this situation to change, better tools and systems will be needed

to filter large volumes of materials and stimulate thoughtful responses from more diverse groups. The expanding use of these interactive tools by large-scale legacy media companies has the potential to create and drive a market for better solutions to these issues.

Soft News

News is what somebody somewhere wants to suppress; all the rest is advertising.

—Attributed to British publisher Lord Northcliffe (1865–1922)

Digital media's low barriers to entry have led to an explosion of nonprofessional content on topics broadly defined as "soft" news (also called "features" or "lifestyle reporting"). One distinguishing characteristic of soft news is that the subject of the reporting typically offers little or no resistance to the reporter; often the person or group is actively seeking public attention. Classic examples include sports, cultural exhibits or performances, community events, movies, restaurants, and other forms of entertainment,³⁷ as well as consumer products and services. Soft features on people or events that would not otherwise be publicly accessible generally rely on an understanding between subject and author that their perceptions of the situation are aligned: the special education teacher welcomes a parent blogger into the classroom to do a story on the dedication of those running the program and its successes, not an exposé on educator incompetence.

Nonprofessional coverage of these easy-to-chew topics is booming both in Web-native media and under the aegis of legacy media online; popular genres include reviews of restaurants, movies, and consumer products. Although this type of participatory media is unlikely to expose corruption or challenge the political status quo, it offers many positive effects, including:

- A cultural landscape enriched by a "long tail"³⁸ effect, in which events, activities, and products too obscure to attract the attention of legacy media reach people who will appreciate them: struggling musicians and artists find their audiences, out-of-the-way restaurants get noticed, low-budget movies develop followings.

- Strengthened community ties through broader sharing of experiences that otherwise would be limited to those attending an event.
- Enhanced problem solving, when the collective wisdom of many people comparing notes on a product or issue illuminates problems or solutions that a single reviewer, however expert, would miss.

Along with these benefits, and despite the noncritical nature of most of the topics involved, there are real concerns around credibility. Authors working without editors may be ill-informed and uncritical, taking at face value the version of events presented by those with a vested interest; they may bring strong personal biases, consciously or not, to the task. Meanwhile, with the public relations industry actively encouraging clients to use online forums to spread their message and dozens of companies brokering arrangements for advertisers to pay bloggers for writing posts about specific products,³⁹ the credibility of user reviews of commercial products is inherently suspect.

When the topic is a performance by the community theater, the enchiladas at a new Mexican restaurant, or the relative virtues of a particular microwave, these risks may seem inconsequential. But when discussions cross over into important areas that were once the exclusive purview of professionals like doctors and lawyers, the risks associated with ill-informed advice or promotional content masquerading as personal testimonial become more serious. Medical, legal,

CONSUMER REVIEWS— A BOOMING FIELD

Three of the most popular consumer review sites employ very different business strategies:

ZAGAT.⁴⁰ Founded in 1979, Zagat pioneered crowd-sourced restaurant guides in the pre-Internet age. It continues to improve and expand its online presence, despite vigorous competition. Partial content is free, low-cost paid subscriptions give access to ratings information, and users who regularly contribute reviews receive free copies of the paper guides.

ANGIE'S LIST.⁴¹ A closed, quality-controlled, subscription-only site with a strong focus on integrity and accuracy. User-contributed reviews of a wide variety of local services are vetted by staff.

YELP.⁴² A free, ad-supported, Web-native, city-by-city user-review site, which originally focused on restaurants and is rapidly expanding to include many other services. Reviewers who have persistent online identities may write a few words or longer; their personal reports give the site a feeling of a social network. A special program rewards active users with free events and products.

Blogtivity is one of many companies connecting advertisers with bloggers for hire.⁴³

Blogtivity
Make Money Blogging

about | jobs | contact | directory

Home Sign-Up FAQs Support

bloggers →

- Earn money by writing blog postings
- Get paid every week through PayPal
- No advertising required, just your opinion

sponsors →

- Generate buzz about your new product or service
- Boost your search rankings with back links
- Increase traffic to your website

FAQs
Frequently Asked Questions

Q: How does Blogtivity make me money?

A: Once you are approved to the Blogtivity system, you are given access to opportunities from companies to post about their news releases. You are paid per posting.

Q: Do I have to say nice things about these companies?

A: No, you would simply be writing a quick article about their news release. No different than a newspaper does.

Blogtivity Login:

Email:

Password:

LOGIN

[Forgot password?](#)

Table 1. The popularity of online media creation activities.

<i>Activity</i>	<i>Percent of Internet users who report this activity</i>	<i>Most recent survey date</i>
Rate a product, service, or person using an online rating system	32	September 2007
Post a comment or review online about a product you bought or a service you received	30	September 2007
Post comments to an online news group, website, blog, or photo site	22	December 2007
Create or work on your own web page	14	December 2007
Create or work on your own online journal or blog	12	May 2008

Source: Pew Internet & American Life Project ⁴⁴

and personal finance issues like real estate are all popular topics in which the potential risks to misinformed consumers are far greater than a disappointing restaurant meal.

More people read or contribute to comments on legacy news sites, user review sites, and other audience-contributed soft news than visit or contribute to blogs or other Web-native media (see Table 1). It is clearly a common entry point into the realm of participatory media, increasingly engaging audiences who have very different perspectives than early adopters.⁴⁵ How this changes the nature of the questions around credibility and the reliability of information is a theme that we return to in later sections.

Opinion and Analysis: The Forte of Author-Centric Media

What's different now is that very often, there are other ways to perpetuate a story, to stay with a story. One way to look at it is if the mainstream media is suffering from Attention Deficit Disorder, you know, moving from one story to another, the online media are suffering from Obsessive Compulsive Disorder, you know . . . staying on a story and staying on a story till something breaks through.

—Arianna Huffington⁴⁶

Authors who want to move beyond the casual comment or restaurant review may be tempted to create something of their own: traditionally, a blog. The ubiquity of blogging software and platforms allows authors to establish their personal publication in a few minutes. The prototypical blog may include personal narratives, commentary, analysis, or summaries of current events, often with links to other sites that provide inspiration.⁴⁷ Despite the popularity of new formats such as the “micro-blogging” platforms of [Twitter](#) and [Pownce](#) (closing in December 2008) and the use of social networking sites to publish personal updates, for new opinion columnists and news analysts, blogs continue to be dominant.

If the early bloggers were the founding fathers and mothers of the participatory media republic, they are now maturing into the role of senior statesmen and stateswomen. Blogs have become so mainstream that they now require an adjective: they are political blogs, placeblogs, corporate blogs, mommy blogs, video blogs (vlogs), feminist blogs, personal blogs, military blogs, and so on.

Moreover, self-edited author-centric blogs should now be distinguished from other media entities that may call themselves blogs but feature editorial hierarchies, that are published within other media structures, or that are predominantly associated with an institution rather than an individual. The roles that these author-centric but hierarchical

HOW BIG IS THE BLOGOSPHERE?

A number of studies aimed at understanding the size of the blogosphere have produced widely disparate estimates of both the number of blogs and blog readership. All studies agree, however, that blogging is a global phenomenon that has hit the mainstream.

—COMSCORE MEDIAMETRIX (August 2008)

Blogs: 77.7 million unique visitors in the United States

Facebook: 41.0 million

MySpace 75.1 million

Total Internet audience: 188.9 million

—EMARKETER (May 2008)

94.1 million U.S. blog readers in 2007 (50% of Internet users)

22.6 million U.S. bloggers in 2007 (12%)

—UNIVERSAL MCCANN (March 2008)

184 million worldwide have started a blog

26.4 million in the United States

346 million worldwide read blogs

60.3 million in the United States

77% of active Internet users read blogs

Source: Technorati⁴⁸

or institutionally affiliated publications play in the news environment are no longer a function of their format. Blogs are one of many formats used to create niche publications serving specialized audiences and creating communities; they may function as aggregators and as social media, collecting and directing attention; and they are another locus for the public critique of the media that has become an important part of the landscape.

The influence of political blogs in the United States epitomizes the potential power of participatory media. The possibility of achieving national recognition by writing a political blog is today's equivalent of the classic American success story in which a mailroom worker rises to become CEO of a major company, except that the climb to success may be measured in months rather than decades. A recent example

is Nate Silver, who has parlayed his exceptional quantitative skills and years of studying baseball statistics into the analysis of political polling data. In March 2008, he launched the blog fivethirtyeight.com, which became a go-to source for legacy media for forecasting election results.

Many of the best-known early political blogs have become commercial successes. [Daily Kos](http://DailyKos.com), started by individual liberal blogger Markos Moulitsas, has evolved into a community of people obsessed with politics that regularly gets over 1 million hits per day.⁴⁹ [TalkingPointsMemo](http://TalkingPointsMemo.com) (TPM) grew from a single-authored blog with a liberal slant to a professional editorial structure with paid staff and an engaged audience that contributes tips and story ideas. The conservative side of the political spectrum is also well represented in the blogosphere, from [Instapundit](http://Instapundit.com), a political blog by University of Tennessee law professor Glenn Reynolds to [Little Green Footballs](http://LittleGreenFootballs.com), where *comment threads* features fast-moving, often-divisive conversations among readers. For every blogger with a large-scale audience, there are many thousands of others that produce online opinion pieces for tiny audiences—sometimes seemingly for their own personal satisfaction.

Whether an indication of the triumph of the blog format or a signal of its pending demise, mainstream institutions have embraced the format (or hijacked it, from the perspective of some bloggers). A continuous stream of derision from “real” bloggers around the frequent missteps or miscalculations of legacy media large and small has not deterred them from adopting and adapting author-centric media for their own purposes. Because of the size of the industry and the deep power of incumbent news brands, this burst of experimentation has already begun to transform the space. The Bivings Group reports that 95% of American newspapers have at least one reporter blog.⁵⁰

An illustrative example is the *LA Times*, which hired well-known blogger and former editor of the successful LAist city blog Tony Pierce to build up the paper's in-house blogs. Less than a year later, the paper's site features more than 40 blogs. The most popular of these, *Top of the Ticket*, written by two veteran political reporters, quickly gained a huge audience and by summer 2008 had made the coveted Technorati Top 100 blogs list.⁵¹ Tony Pierce's success exemplifies the promise of taking the best from both worlds. He explains that although these journalists initially resisted the pace demanded by blogging, they eventually felt rewarded by the constant feedback and liberated by the less formal style of blogs, which

he regularly describes as “how most journalists would write if they could.”⁵²

A Global Voices project in partnership with the Reuters news agency, [Voices without Votes](#)⁵³ is an example of legacy media working with participatory media rather than replicating the form using its own staff. Global Voices recruits bridge bloggers who draw on citizen media from around the world to offer its audience international perspectives on the U.S. presidential campaign. Voices without Votes employs only one full time editor; their authors are all volunteers.

Reporting

Although participatory media’s influence on the information landscape is dominated by its ability to reflect and mobilize public opinion, original reporting is also an important component. There are a number of canonical examples: the role of the blogosphere in Trent Lott’s fall from grace and resignation from his position as the U.S. Senate Republican leader; the instrumental role of the blog LittleGreenFootballs in breaking the Rathergate story; the investigative work of TalkingPointsMemo in the story of the Bush administration’s firing of several U.S. attorneys.

Original reporting of the news is a substantially different and more demanding activity than contributing to soft news or writing personal narrative, commentary, or opinion. Examples of dedicated citizen journalists who cover local City Council meetings are turning out to be less common than many had predicted.

Accidental Journalists

The eyewitness who finds herself in a position to “commit acts of journalism”⁵⁴ and reports on breaking news before professional journalists can be dispatched to the scene has gained new prominence in the age of low-cost digital media production and distribution. Cell-phone pictures from demonstrations anywhere in the world are now an unsurprising part of the news.

There is no question that audience-contributed reporting, especially photographs and videos, has become a recognized source of material both for legacy media and for Web-native publications like Gothamist that rely heavily on audience contributions. But the use of amateur photography and eyewitness accounts by professional media is not new. The ubiquity of inexpensive still and video cameras, such as those

EUROPE: ABOUT THAT S WORD...

BY LOVA RAKOTOMALALA

The latest line of attack from John McCain’s campaign seems to revolve around that S word—you know, as in “Obama is a socialist.” It is often followed by the obligatory E (for Europe) word, as McCain said himself: “At least in Europe, the socialist leaders who so admire my opponent are upfront about their objectives.”

So what do Europeans think of the latest comment from the Republican presidential candidate?

Guillemette Faure, a French blogger at rue89 is amused but not surprised:

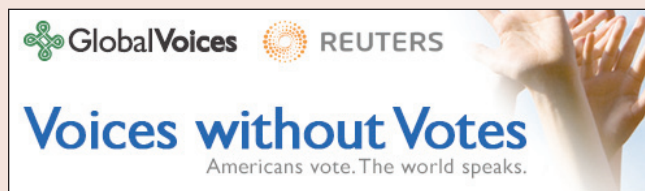
“C’est le dernier gros mot de la campagne . . . “

It is the latest dirty word of the campaign. Note the two-in-one line of attack: Obama is a socialist and he is supported by the foreigners. [...] Obama found the counter-argument, though: “Warren Buffet, the billionaire, has called to vote for me, as well as Colin Powell—and John McCain thinks I adhere to socialism.”



ABOUT LOVA RAKOTOMALALA

Hi, I am a post-doctoral research associate based at Purdue University in Indiana. I have been following this historical presidential campaign with heightened interest. I will give you my perspective from a non-voting, Malagasy/French perspective.



Voices without Votes authors reported on global citizen media’s coverage of the U.S. election campaign.⁵⁵

in mobile phones, and the ability to transmit materials across the globe instantly have led to a massive shift in the scale and immediacy of audience-contributed materials available to legacy media and directly to the online public. Because the same tools are also in the hands of traditional reporters, whether staff or freelancers, the use by legacy media of this accidental journalism—in which being in the right place at the right time is the primary qualification—continues to be mostly limited to extreme weather and accidents. As the Associated Press's Lou Ferrara notes, if citizen reporting as a source for legacy media were as significant as some predicted it would be, we would not still cite the example of the London Underground bombing photos three years later. From his point of view, it is very rare for reporting by amateur eyewitnesses to do more than supplement professional coverage of significant events.⁵⁶

Meanwhile, large news agencies and other global news companies—presumably inspired by the proliferating use by amateurs of inexpensive lightweight media production devices—are investing in new reporting tools, including mobile phones. One such experiment is MoJo,⁵⁷ which was created by a Reuters development team. This hardware and software package transforms a Nokia mobile phone into a video camera that can do minor edits, input labels and other information, and upload the video from the field. The MoJo development team also invested in the social engineering needed to get the agency's print-oriented journalists to use the modified phones effectively. Rather than trying to get writers to produce full-scale video interviews or packages, the team worked with correspondents to develop formats that worked with existing habits. For example, only at the end of a traditional pen-and-

notepad “on-the-doorstep” interview would the journalist pull out the camera/phone and ask the subject to answer one last question on camera. The results are short video clips that enhance text reports.

Activist Media and Almost-Journalists

It has been left to the ACLU and similar groups (such as the Center for Constitutional Rights and Electronic Frontier Foundation) to uncover what our Government is doing precisely because the institutions whose responsibility that is—the “opposition party,” the Congress, the Intelligence Committees, the press—have failed miserably in those duties.

—Glenn Greenwald⁵⁸

Although breaking news reported by nonprofessionals has been dominated by hurricanes⁵⁹ and car crashes, an important exception is the documentation, often by activists, of political violence, such as police crackdowns on demonstrations, and of humanitarian crises in remote locations. This documentation may happen spontaneously, such as when an unconnected observer documents an event, or it may be anticipated, such as when demonstration organizers plan for photo and video coverage by participants. The power of such reporting was demonstrated in 1991 when the incendiary footage of the vicious beating of Rodney King by Los Angeles police, videotaped by someone in a nearby apartment who was awakened by the sirens,⁶⁰ touched off riots and a national conversation on racism. That event inspired the creation of the nonprofit [WITNESS](#),⁶¹ which

Reuters Labs developed a special equipment package to allow reporters to file stories from mobile phones.



gives cameras and training to human rights activists around the world and works to use video documentation to raise awareness among the public and policymakers and to support legal action against human rights abuses.

Activist journalism is especially powerful in conflict zones and other locations where there is a temporary or permanent lack of professional reporting because of remoteness, danger, lack of interest, or refusal of local authorities to allow journalists into the area. Local media may be unable or unwilling to report, due to censorship, self-censorship, lack of resources for reporters' travel or safety, or lack of skills. In these situations, local opposition groups and international humanitarian agencies have stepped in to fill the void. Reporting from Burma,⁶² Tibet, Palestine, and elsewhere has demonstrated the potential of this practice to alter the news agenda and to influence international public opinion.

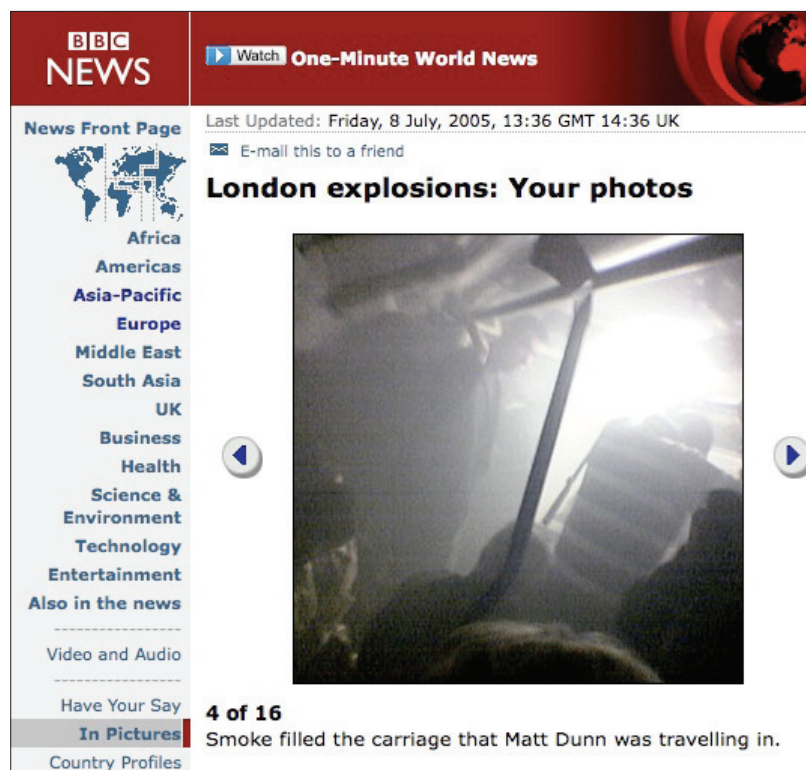
As legacy news organizations slash budgets for foreign reporting, they increasingly rely on advocacy organizations such as Human Rights Watch and Amnesty International for foreign reporting, particularly in places that are hard to access. The move of advocacy organizations into the space traditionally occupied by news organizations blurs

the line between strategic communication and professional journalism: a situation that is often awkward for the advocacy organizations themselves. With advocacy organizations looking (or forced) to reshape themselves and their modus operandi, we need to re-examine questions with regard to their production practices. Who are the researchers who are taking up the functions of journalists? How are they trained? How are stories edited and vetted? How are they leveraging user-generated content, if at all?

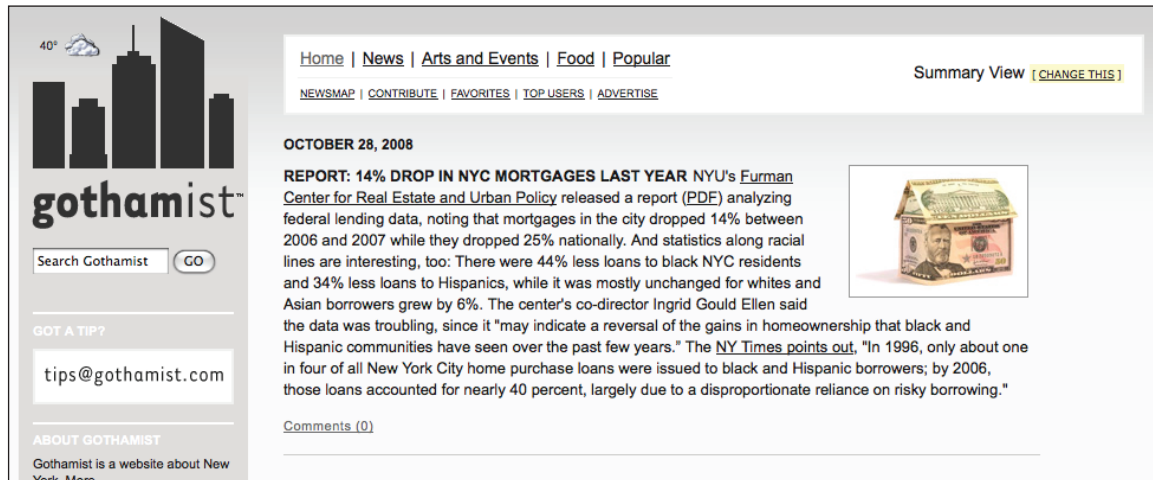
The growing phenomenon of media created by nonprofit organizations raises many questions. To what extent are audiences changing—should media by advocacy organizations target policymakers or the general public? Is an op-ed in the *New York Times* still the Holy Grail for raising awareness of an issue? The increasing reliance on the work of nontraditional journalists, such as bloggers and researchers of advocacy organizations, also raise questions about their status—under what circumstances can they be categorized as journalists and do they deserve equivalent legal protection?

Dan Gillmor suggests that those interested in expanding quality journalism should welcome these changes, actively promoting journalism standards to relevant organizations:

The BBC published photos sent in by survivors of the July 2005 bombings.⁶³



Alongside stories on the lifestyle of its young urban audience, Gothamist includes conventional economic and political news, such as this report on the mortgage market.

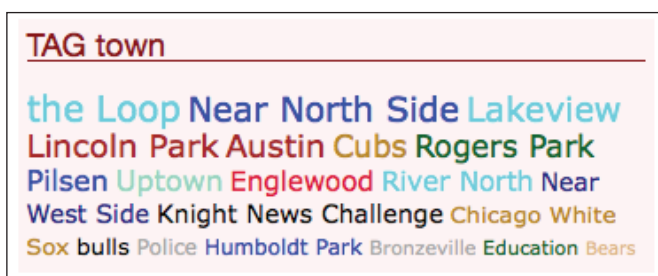


As traditional journalism companies are firing reporters and editors right and left, the almost-journalist organizations have both the deep pockets and staffing to fill in some of the gaps—if they'll find a way to apply those old and new journalistic practices to their media, whether it's designed to inform or advocate.⁶⁴

Citizen Journalism

When it comes to reporting on a more sustained basis, organized citizen journalism projects, such as *Chi-Town Daily News* and Off the Bus, among others, recruit and encourage individual amateur reporters to provide original reporting of hard news topics. Although these have produced some impressive results, such as a report by a *Chi-Town Daily News* volunteer on police brutality,⁶⁵ no clear model has emerged to sustain consistent, comprehensive high-quality reporting by volunteers.⁶⁶

The tag cloud on ChiTownDailyNews.com shows popular neighborhoods and topics.



Groups that promote ambitious and deliberate citizen reporting on hard news face many challenges. The first is motivating people to work without pay on stories that take significant time on a schedule dictated by events rather than the volunteer's convenience. The *Chi-Town Daily News* is finding that getting volunteer reporters to produce materials on serious local governance issues while meeting basic journalistic standards is time-consuming and expensive. It is complicated by the difficulty of retaining volunteers, a problem common to many local nonprofits. At the Forum,⁶⁷ in rural New Hampshire, which has a lower budget and is less strict editorially than *Chi-Town Daily News*, volunteer authors select their own topics, write in a more personal style, and receive minimal editing. The quality of reporting and writing that results is uneven and the site's founder is eager to find the resources to offer volunteer contributors basic training in journalism.⁶⁸

The Gothamist Network's flagship New York City site seems to have found a hybrid approach that works well for its quirky but popular editorial model. Thanks to its large network of volunteer authors who normally contribute based on their interests, Gothamist is often able to mobilize them to cover fast-breaking events, quickly getting photos or brief reports up on its site—occasionally faster than legacy media. This type of achievement is particularly impressive in the wildly competitive New York City news environment. The level of those instant reports is admittedly superficial and Gothamist is clear about not aspiring to replace professional journalists. Instead, it happily points to legacy media sites for detailed reports and follow-up coverage. This system certainly benefits

ARE THESE THE BIGGEST MOMENTS IN JOURNALISM-BLOGGING HISTORY?

1998: The Drudge Report breaks the Monica Lewinsky story. Though Drudge denies the site is a blog, it demonstrates how the nimbleness of an online operation could scoop the mainstream media.

2001: September 11 attacks: While news websites collapse under the global demand, a network of blogs pass on news and lists of survivors.

2002: Trent Lott forced to resign after apparently pro-segregationist statements made at an event and initially ignored by mainstream media, were picked up and fleshed out by bloggers.

2003: Invasion of Iraq: Salam Pax, the “Baghdad Blogger,” posts updates from the city as it is bombed, providing a particular contrast to war reporters “embedded” with the armed forces and demonstrating the importance of nonjournalist bloggers.

2003: Christopher Allbritton raises \$15,000 through his blog Back-to-Iraq 3.0 to send him to report independently from the war, demonstrating the ability of blogs to financially support independent journalism (called the “tip-jar model”).

2004: Rathergate/Memogate: CBS’s 60 Minutes broadcast a story about George W. Bush’s National Guard service, and within minutes a section of the blogosphere mobilizes to discredit the documents on which it is based. Dan Rather eventually resigns as a result.

2004: Asian Tsunami: more blogs mobilize around a disaster, of particular significance for video blogging.

2005: July 7 bombings, London: Mobile phone image of passengers walking along Tube tunnel posted on MoBlog (although was first sent to The Sun), and goes global from there. A significant moment in moblogging.

2006: The Pulitzer Prize for Public Service cites the blog run by the New Orleans Times Picayune during Hurricane Katrina. The flexibility of blogs during a disaster that stopped printing presses and delivery trucks was driven home.

2007: Talking Points Memo blog breaks story of U.S. attorneys being fired across the country, demonstrating the power of involving readers in an investigation, and carrying it out in public.

2007: Dave Winer wins his \$2,000 bet (made in 2002) that blogs will rank higher than the New York Times for the top 5 news stories of 2007, demonstrating the importance of blogging in news distribution.

2007: Myanmar protests: The clampdown that followed democratic protests in the country was seen around the world thanks to blogging, moblogging, and social networking sites. Journalists were not allowed in the country. Even after the government cut off the Internet, bloggers located outside the country continued to

post material.

2008: Peter Hain resigns over donations revealed by UK political blogger Guido Fawkes, who in 2006 broke a story on an affair by Deputy Prime Minister John Prescott that he claimed lobby correspondents were sitting on.

2008: Chinese Earthquake: A key moment for microblogging, as news of the earthquake spreads on Twitter (and Chinese IM service QQ) quicker than any official channels.

2008: Collapse of Northern Rock: BBC correspondent Robert Peston breaks one of the biggest stories of the year—not on TV, but on his blog.

What have I missed? This is a horribly Anglo-American list, too, so I’d particularly welcome similar moments from other countries. Nov. 20, 2008

In November 2008 Paul Bradshaw proposed this list of significant events in the history of journalism blogging, asking readers to add to it. It continues to evolve on Online Journalism Blog.⁶⁹

Gothamist, but it has little effect on the quantity or quality of original reporting in New York City.

Crowdsourcing

One of the most promising new reporting techniques to emerge in the digital media world is *crowdsourcing*⁷⁰—tapping into “the collective wisdom of millions of amateurs around the world to come up with a solution.”⁷¹ In journalism, crowdsourcing refers to any number of techniques that draw on many low-level voluntary contributions by people—usually those without journalism training or other special expertise—to solve complex reporting tasks.⁷²

By now, there is little question that crowdsourcing can be used effectively to gather information that would be impossible or prohibitively expensive for a traditional news organization to collect on its own. As Tom Stites notes, although crowdsourcing is usually presented as a Web 2.0 phenomenon, the journalistic practice predates the term and can be done with or without the Internet.⁷³ Some much-discussed early experiments in crowdsourcing were done in 2007 by WNYC’s Brian Lehrer, who used his daily radio talk show to solicit listener reports on topics like the price of milk, bread, and lettuce in neighborhood stores.⁷⁴ Listeners entered the data on the station’s website, where it was collated by hand, analyzed, and mapped by the radio staff. In this case, the Internet was not the determining factor; the call for participation was issued via traditional media and the data could have been submitted by telephone as easily as Internet.

Wired’s Threat Level blog recently won a Knight-Batten Innovation in Journalism award for their work enlisting readers to use a tool called Wikiscanner.⁷⁵ This tool allowed them to identify cases where anonymous edits to the Wikipedia participatory encyclopedia were apparently done by interested parties with corporate or political agendas.⁷⁶ The range of these examples demonstrates that such investigations can be successfully undertaken by a broad range of institutions, from legacy media to Web-native publications to individuals and nonprofit organizations—partisan and not.

At its best, crowdsourcing represents something truly new: it uses the power of the network in support of high-quality journalism. It is also remarkably flexible: it can be done by professionals and amateurs, large entities and small, using simple or sophisticated technologies. It has potential applications for topics ranging from local environmental issues

to multinational investigations of malfeasance by transnational corporate giants. It can replicate the power of massively expensive journalistic investigation in less time and at a lower cost. By all rights, it should be revolutionizing journalism.

Why then do we still discuss the same handful of successful examples over and over again? Why has crowdsourcing not exploded in either Web-native or legacy media?

The answer is that no part of doing it right is easy. Identifying topics that have significance and where the reporting can be broken into the right type of tasks takes time and skill. Systems to collect and analyze the data require technical setup work that can be complicated and unique to each case. Identifying and locating participants is not trivial; even when the task doesn’t require specialized knowledge, skill, or experience, participants motivated to assist with one problem may have no interest in the next topic. Tasks that require finding and motivating people within narrow categories, such as patients who have had a specific procedure, have an added layer of difficulty. The ambitious Assignment Zero experiment that Jay Rosen and a team of people undertook with *Wired* in 2007 was described afterward by organizers as an education in the challenges of motivating and supervising volunteer contributors. Jay Rosen advised those who would follow in his footsteps that “dividing up the work into tasks people can and will do is among the trickiest decisions the project will have.”⁷⁷

One promising project developed by Minnesota Public Radio (MPR) is the Public Insight Network, which aims to incorporate crowdsourcing into reporting on an ongoing basis. MPR is training other public radio stations and now newspapers to build similar systems for themselves. The Public Insight Network system has two benefits for media organizations:

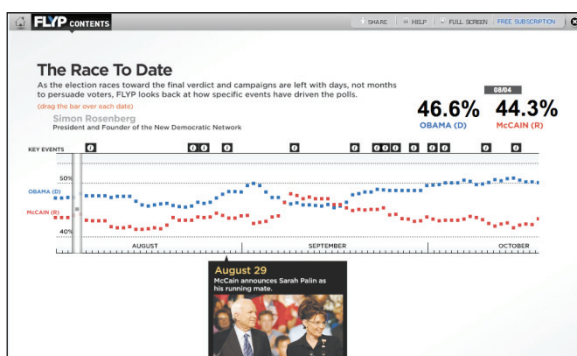
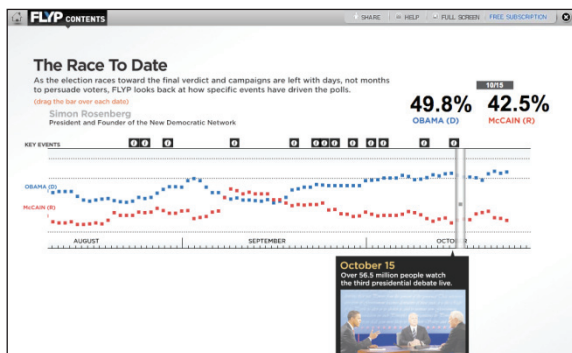
- It is built to last—rather than being designed around a single investigation, it creates a network of potential informants who can be contacted repeatedly to answer different kinds of questions, from first-person experiences to expert opinion.
- The in-person town meeting component acts as a mechanism to build audience loyalty and demonstrate the responsiveness of the newsroom to the community it serves.

This project has gotten a great deal of attention from the public broadcasting community and some local newspapers, but it is not a solution for all types of media. It requires significant commitment by media organizations to set up, staff, and maintain. Although the power and potential of crowdsourcing is undeniable, much more experimentation is needed to develop systems that are useful for a variety of reporting projects and media or nonmedia entities that wish to foster them.

New Genres: Multimedia, Multiplatform, Interactive

As broadband penetration increases in the United States and as compression technologies improve, the consumption of audio, photo, and video content delivered via the Internet and wireless data services is soaring. The phenomenal popularity of media sharing sites like YouTube and Flickr and the growing willingness of audiences to watch entire television programs online⁷⁸ are driving media of all types to expand their use of nontext media, from photos and slideshows to audio and video for use online or downloading to handheld media players, increasingly including mobile phones.

Flyp's interactive election campaign timeline allows the audience to explore the relationships between key events and changing poll numbers.⁷⁹



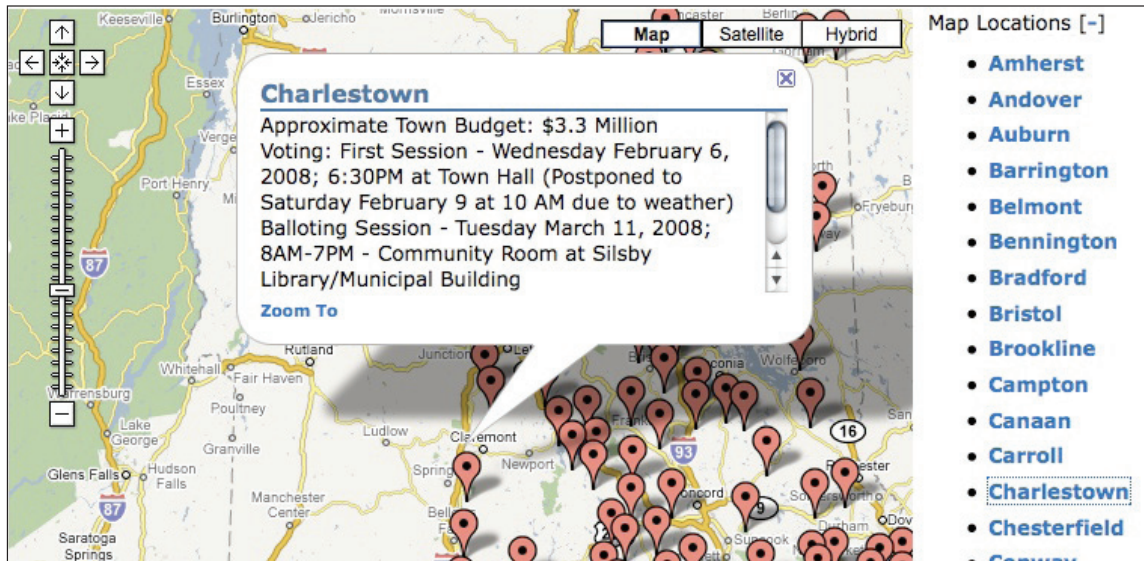
Multimedia formats like slideshows and animation have proven popular with legacy media but have not grown as fast on Web-native news media sites as some would have expected. *Flyp magazine* is an intriguing experiment that aims to create new forms for serious journalism in which a multimedia, nonlinear format is integral to each story rather than an afterthought. Flyp was still in beta as this report was being written; it is too early to judge whether this innovative experiment will find a broad audience or inspire imitations.

An enormous variety of tools has made online data visualization, mapping, and interactive graphics available to authors of all kinds. As the 2008 Beyond Broadcast conference highlighted, applications of these tools have become a journalistic genre in their own right.⁸⁰ One of many interesting map-based projects within legacy media is New Hampshire Public Radio's Town Meeting Map.⁸¹ This site maps the upcoming town meetings across the state, along with the budgets and other proposals that are to be discussed, which have been submitted electronically by each municipality. This impressively low-cost project (less than \$500 in programming costs⁸²) has many functions: it allows local residents to compare issues facing their own town with others in the state; gives officials feedback on proposals and new ideas from their own constituencies and elsewhere; and helps journalists at the radio station discover and report stories that they would almost certainly not find using traditional reporting techniques.

New formats have potential to expand news coverage beyond its traditional functions. For example, in 2008, news about the Sichuan earthquake first broke on Twitter, a microblogging website, and the website Ushahidi.com was instrumental in collecting and mapping up-to-the-minute information on postelection violence in Kenya. Critics also point to the narrative style and format of the traditional newspaper story as limiting the kinds of stories that are covered, arguing that traditional journalism is not well equipped to pay attention to more complex events that take longer to unfold and do not fit the traditional "story" mold. We have yet to understand how different technological platforms of production and distribution might improve the quality and quantity of the kinds of stories being told.

Despite the power of nontext and nonlinear formats, projects that combine creative uses of technology with carefully researched information and journalistic insight remain rare. In most traditional newsrooms, the use of interactive graphics and animation is viewed as experimental and organizations

New Hampshire Public Radio's online map displays information on local budget issues.⁸³



WHO GOES ONLINE USING MOBILE DEVICES?

Pew research characterizes 62% of Americans as members of a wireless, mobile population that participates in digital activities away from home or work. It is not only young people who are attuned to this kind of access. African-Americans and English-speaking Latinos are more likely than white Americans to use nonvoice data applications on their cell phones.

Source: *Pew Internet & American Life Project*⁸⁴

continue to struggle with decisions over technology, training, and integration of the planning and design of interactive graphics into the editorial process. Despite the boom in video production by legacy print media for their online products and the expansion of video advertising on news sites, most newspapers continue to struggle to define the place of video in their editorial mandate. This situation has led some to predict that journalistic video on newspaper sites will never amount to much.⁸⁵ Too few connections exist between the people developing the most promising applications and the journalists who have insight into what kinds of data and topics might benefit from visualization and data manipulation.⁸⁶

Forming New Audiences

The ability of online media to create new audiences at low cost has given birth to a rich and diverse universe of specialized media while allowing legacy media to expand their audience base beyond their traditional markets. These new audiences, united by common interests, may be geographically dispersed and represent a wide demographic range. Economic factors are at the heart of these changes: the low cost of online distribution and promotion allows media to attract a specialized audience online for a fraction of what it would cost using offline marketing.

As described in the previous section, these low barriers to entry have stimulated a widening set of authors, old and new, to produce an abundance of online content—the vast majority of which is free—that competes for the attention of a finite number of media consumers. Although the impressive growth in the number of online voices has left an unmistakable imprint on the media landscape, an equally important factor is the choices made by audiences—choices that result in the formation of new communities of interest. These overlapping, constantly shifting audiences represent a challenge to legacy media to compete for people's attention in unfamiliar ways.

These newly formed audiences have a wide range of information needs and levels of participation. From slick professional commercial publications to casual blogs, the

structures chosen by different niche publications reflect that range, with audiences varying from the temporary and casual to the deeply committed.

Some niche publications, like iParenting.com, were started by people eager to exchange experiences and opinions with others in similar situations; a few achieved huge popularity, attracting attention from large commercial media.⁸⁷ Others, like the passionate transatlantic online conversations devoted to Anglican Church politics,⁸⁸ remain as functionally invisible to both the institutional media and the commercial Internet as the church newsletters they replaced, yet are treasured by the communities of interest they serve.

Here again, the term “blogosphere” is often used as shorthand for these online publications and for the groups they serve. As the online media space matures, blogs are not the only format being used. There are examples of specialized audiences being creatively and successfully served online by every type of media structure, from extensively edited traditional publications with few participatory media features to single-author blogs, and from sites that rely almost entirely on audience participation to sites with specialized aggregation and news agency functions.

Hyperlocal: The New Importance of Location

A placeblog is an act of sustained attention to a particular place over time. It can be done by one person, a defined group of people, or in a way that's open to community contribution. It's not a newspaper, though it may contain random acts of journalism. It's about the lived experience of a place.

—Lisa Williams⁸⁹

The ability of low-cost digital media to create dedicated publications targeting geographic communities too small to be financially attractive to traditional media structures has led to the creation of a new online genre: *hyperlocal media*. Experiments in hyperlocal news media have tried many different formats; some are clearly successful in meeting the information needs of their community, and others have failed. Many show potential but are struggling to survive.

For placeblogs and community news sites created to fill an information vacuum in small communities not previously covered by legacy media, such as the Forum in rural New Hampshire,⁹⁰ the lack of competition provides the luxury of

defining success on the community's own terms. Assuming that they are not set up to deliberately misinform, any increase in the availability of locally relevant information is positive, no matter how amateurish the quality of the reporting or small the audience. Their existential challenge is to create an entity that can and will be sustained by the community. This sustenance takes many forms: social reinforcement, volunteer labor, donations, subscriptions, local advertising, and occasionally municipal funding.

News sites that coexist with legacy media covering the same geographic area face different challenges. The way they position themselves in relationship to other media—aiming to complement or compete against them—is key, though either choice can be successful. The Gothamist⁹¹ network of urban sites exemplifies a successful strategy of interdependence—its authors and editors filter multiple sources of legacy media to suit the needs of its audience. In contrast, the VillageSoup community website's 2008 acquisition of several local weekly newspapers in rural Maine demonstrates the commercial potential of locally focused online media.⁹² The company is now working to bring the traditional journalists from the acquired papers into the culture of the website, which relies on contributions from a mix of paid staff and volunteer authors as well as content contributed by local businesses.⁹³

Some large legacy media outlets have jumped on the hyperlocal bandwagon, using their websites to offer audiences ways to get and contribute to news at the neighborhood level. The *Washington Post*'s much-touted experiment with a separate site, LoudounExtra.com, to serve a neighboring county was labeled a “hyperlocal flop” by the *Wall Street Journal*.⁹⁴ Nevertheless, the company continues to experiment with ways to offer readers community-level information. In New Orleans, nola.com—the online incarnation of the *Times-Picayune* newspaper—hosts discussion forums for more than three dozen separate districts in its coverage area, though the level of activity and the amount of accompanying news coverage varies tremendously from neighborhood to neighborhood. Many believe that expanding and promoting local coverage is the best hope for newspapers, and a recent study shows that editors share this opinion: 97% of newspapers editors surveyed by the Project for Excellence in Journalism called local news “very essential,” significantly more than any other news category.⁹⁵

Several commercial Web-native ventures have tried to capitalize on the interest in community-level information, by using geographical search and aggregation techniques

The Times-Picayune website offers readers neighborhood-by-neighborhood forums.



Technorati Top Blogs in mid-December, 2008 ⁹⁶

1. Breaking News and Opinion on The Huffington Post

By Arianna Huffington · 1 day ago
<http://huffingtonpost.com>
 Authority: 28,642

2. Gizmodo, the Gadget Guide

2 days ago
<http://gizmodo.com>
 Authority: 17,548

3. TechCrunch

By Michael Arrington · 2 hours ago
<http://techcrunch.com>
 Authority: 17,193

4. Engadget

By Weblogsinc · 6 days ago
<http://www.engadget.com>
 Authority: 14,627

5. Ars Technica

Ars Technica the Art of Technology. News, analysis, and in depth coverage of technology.
 By Ars Technica, LLC · 61 days ago
<http://arstechnica.com>
 Authority: 13,377

6. Boing Boing

Boing Boing is a weblog of cultural curiosities and interesting technologies. It's the most popular blog in the world, as ranked by Technorati.com, and won the Lifetime Achievement and Best Group Blog awards at the 2006 Bloggies ceremony.
 By Mark Frauenfelder · 57 minutes ago
<http://www.boingboing.net>
 Authority: 12,705

7. Lifehacker, tips and downloads for getting things done

14 days ago
<http://lifehacker.com>
 Authority: 12,528

to compile relevant information from sources such as government sites and business directories, and encouraging audience contributions and discussions. Topix⁹⁷ combines all of these elements, generating pages on an astonishing range of communities that combine stories from local media, its own discussion forums, and locally relevant advertising. Another commercial effort, Backfence.com, failed in its attempt to build a commercial network of audience-driven hyperlocal sites in suburban communities in Virginia, demonstrating that the availability of a platform is insufficient to stimulate community.⁹⁸

Finally, the ability to determine automatically the location of users of the Internet and mobile devices is driving innovation in a number of other areas that affect news media as well. These include the development of location-specific advertising and place-sensitive content such as tourist information for mobile phones. These trends may lead to technological innovations that can support forms of localized news media that go far beyond today's experiments.

The Über-Niches: Partisan Politics and Technology

There are two arenas in which Web-native media are indisputably reaching large audiences and having a noticeable impact on the news agenda: partisan politics and technology. Both are seen as harbingers of a future where the audience plays a significant role in shaping news and the news media.

Technology is among the most successful themes in Web-native media. Seven of the top ten blogs on Technorati are related to technology. These are the mass audience sites; many others, such as the successful, technically oriented audience-driven Slashdot, have loyal—if more specialized—audiences. Technology reporting has changed not only the media sphere, but arguably the technology industry itself. But the explosion of online media focusing on technology is not so much a story of the voiceless finding a place to speak as of an exploding market opportunity giving rise to startups of various sizes, mirroring the high-tech industries they cover. There has also been a flood of advertising and marketing dollars supporting this boom in Web-native media focused on technology, driven by growing consumer interest.

Technology is an area in which professionals in the field and devoted amateurs are more knowledgeable than most professional journalists, even those specializing in the area. This is how participatory media works best, when a knowledgeable and engaged audience organically supports

the editorial functions of agenda-setting and fact-checking.

The political blogosphere and the online fundraising and activism that accompany it have been the object of intense scrutiny at least since the groundbreaking Howard Dean campaign. Most of the examples of the power of participatory media, positive and negative, tend to emerge from the fierce swirl of opinion, analysis, and rumor in the political blogosphere; political blogs are the focus of many of the fears and hopes for the online media. The boom in online news sources that identify their audiences based on political preferences has fed fears of fragmentation if audiences confine themselves to media sources that echo their own thinking and biases.

The expression of biased and extreme positions is not the primary focus of concern, but rather the notion that audiences are aggregating their news from a collection of partisan sources, spending less time with centrist points of view and opposing ideas. Early evidence suggests that this is not the case. The Pew Internet and American Life Project reports that “wired Americans hear more points of view about candidates and key issues than other citizens. They are not using the Internet to screen out ideas with which they disagree.”⁹⁹

Other research suggests that political blogs may play a role in promoting political engagement of all kinds. An analysis of a select sample of Internet users found that of the influential and politically hyperactive group of citizens that have been called “Poli-fluentials,”¹⁰⁰ 52% read political blogs. Active participation in those online communities, such as making a political contribution at the suggestion of a blog, is an extremely strong factor in predicting whether a person qualifies as a Poli-fluential. These people are well-connected and enthusiastic promoters of candidates and causes who also consume above-average amounts of news media in general. They call into TV and radio talk shows to express their opinions, and write letters and send emails to newspaper and magazine editors and candidates and public officials.¹⁰¹

Many factors drive the phenomenal growth of online coverage of partisan politics and technology, including their relevance to a large percentage of American adults, the passion inspired by these topics, and the large amounts of money dedicated to influencing individual decisions in these arenas. The accessibility of the coverage may also play a key role; there is much to learn and absorb about these topics that remains within the reach of nonexpert audiences and commentators.

Despite the serious challenge posed by Web-native publications to the dominance of legacy media’s influence

in these areas, both politics and technology continue to be covered extensively by legacy media. It is natural for advertising-supported media of all kinds to compete for these large audiences, and there is no question that the addition of new voices in these areas has expanded the discourse in these and other areas. However it is far from clear how the flood of both commercial and volunteer energy focused on topics like politics, PCs, and parenting will trickle down to the less-popular topics that are part of a truly diverse news agenda.

Forming Online Audiences

Just as the definition of authors has changed, our understanding of audiences has also changed. News audiences are no longer linked primarily by geography—they are now just as likely to be defined by particular interests and demographic characteristics. Audiences also have many more choices than in the past: as audiences splinter, sustaining a large audience grows more difficult.

There are a number of success stories in which participatory media entities have attracted loyal audiences with remarkable speed. These successes tend to feature motivated, easily engaged, and connected audiences in economically attractive markets, including some smaller markets that were not economically viable for legacy media’s traditional cost structures.

Providing information to other groups—particularly underserved communities that lack these characteristics—is a promising area for digital media, with its ability to deliver targeted information at relatively low cost. But there are serious obstacles to success. Ensuring accuracy, relevance, and accessibility in online media serving niche audiences who lack relevant expertise and media literacy remains a serious challenge. Participatory media that represent and serve heterogeneous groups may be very powerful but are unlikely to emerge organically. Surmounting these challenges will require help from outside of these communities to build and sustain media to serve and represent these audiences.

Finally, the very qualities that help participatory niche publications thrive may also limit their contribution to the overall news environment. Publications aimed at very specific audiences with specific shared knowledge are likely to remain impenetrable to those whose interest is more casual. The homogeneity of successful niche audiences is also limiting—the success of *Gothamist* in serving a young educated urban

audience with similar lifestyles and levels of disposable income contrasts with the struggles of *Chi-Town Daily News* and others to engage racially and socioeconomically diverse contributors.

Redefining Editors

Perhaps the most profound shift in the online media sphere is the way that new structures change the roles of the editor. A variety of editorial roles were once contained within a single institution, from the micro level of assigning, fact-checking, and copyediting specific stories to the macro level tasks of determining the prominence and weight assigned to news topics. On the Internet, these editorial roles are often disaggregated. Any number of unconnected individuals or institutions may perform these functions for a particular story. At times, they may be skipped all together. Today, the decision to report a specific story not only contributes to a defined institutional news product aimed at a target audience, but also adds one more item to a vast collection of stories that may be highlighted, re-edited, commented upon, or placed into contexts its original commissioning editor never imagined.

In the traditional mass media model, editorial products are finite, bounded by the limitations inherent in each medium: the pages of printed newspapers and magazines, the transmission radius of a broadcast signal, the fixed length of a news broadcast. These limitations, and the intellectual property models that accompany them, are fundamental to the decision-making process of editors in legacy media. Traditionally, editors commission or acquire news items, and determine their unique format, length, and arrangement in time and space, whether on the printed page or in an audio or video program. These decisions reach the entire audience of any given publication or program in the same way; every newspaper subscriber sees the same front page, every radio listener hears the same stories in the same order. Moreover, a traditional editor selects from sources limited to those that are in some sense the property of the news institution—the output of its paid staff along with materials from news agencies, syndicators, or other sources with which they have a defined (though not always financial) relationship. This applies not only to editorial content but also to local entertainment listings, the police blotter, crossword puzzles, and even letters to the editor.

Digital media forms are removing these limitations and provoking fundamental shifts in the composition and

consumption of media products. Today, news consumers might look at stories drawn from thousands of online sources selected and compiled in a number of ways, including:

- Computer algorithms and human editors using computer tools to sort and categorize stories, allowing individuals to preselect and prioritize the topics they find interesting while keeping others hidden.
- Recommendations, links, or feeds from online publications, blogs, legacy media, friends, or organizations, which may pull together materials from multiple sources.
- Anonymous groups,¹⁰² through ranking, tagging, and popularity systems ranging from Digg, Reddit, and Del.icio.us to the “most emailed,” “most blogged,” and “most commented” lists that are now ubiquitous on legacy media sites.

Blogs, online chat rooms, and other author-centric and audience-driven models represent the classic example of disintermediation in media: authors deliver their observations, analysis, and opinions directly to their audiences without the filter of an editor. However, this unmediated relationship remains the exception. Most online news sites with a sizable audience now include various editorial layers, although the functions of those editors vary from story to story. This is true not just for Web-native sources but also the websites of legacy media organizations as they adapt to the unbounded nature of the Web. This transformation of the editor has barely begun. Much depends on its outcome.

Aggregation: The Personalized Editor

The news aggregator is a Web-native structure that has no real parallel in pre-Internet media, though the enduringly popular *Reader's Digest*¹⁰³ may be considered a similar phenomenon. The attractiveness of aggregators—which allow the audience to mix and match sources of news and information based on their interests, political leanings, and time budgets—is undeniable. This is amply demonstrated by the popularity of the news aggregation services of online giants Yahoo!, Google, and AOL and the rising popularity of the local news aggregator Topix. Meanwhile, a plethora of legacy media and new entities such as Silobreaker are working hard to replicate their success.

The list of the top news destination sites (see Table 2)

Brand or Channel	July 2008 Unique Audience	July 2007 Unique Audience	% change
MSNBC Digital Network	37,516	26,015	44.21%
Yahoo! News	35,225	32,674	7.81%
CNN Digital Network	32,977	29,757	10.82%
AOL News	22,010	23,103	-4.73%
NYTimes.com	19,513	14,149	37.91%
Tribune Newspapers	16,177	12,218	32.40%
ABCNEWS Digital Network	13,534	9,876	37.04%
Gannett Newspapers & Newspaper Division	13,254	13,812	-4.04%
Fox News Digital Network	11,540	9,343	23.51%
Google News	10,776	8,973	20.09%
USATODAY.com	10,404	10,611	-1.95%
McClatchy Newspaper Network	10,380	8,338	24.49%
CBS News Digital Network	9,197	9,203	-0.07%
WorldNow ⁱ	9,070	7,604	19.28%
washingtonpost.com	8,935	9,157	-2.42%
Hearst Newspapers Digital	8,225	7,596	8.28%
Advance Internet ⁱⁱ	8,044	5,648	42.42%
MediaNews Group Newspapers	7,574	6,843	10.68%
Topix ⁱⁱⁱ	6,229	5,949	4.71%
Cox Newspapers	5,842	3,723	56.92%
Slate ^{iv}	5,763	4,875	18.22%
IB Websites ^v	5,633	6,202	-9.17%
BBC News	5,253	6,408	-18.02%
Gannett Broadcasting	5,010	3,893	28.69%
Fox Television Stations	4,940	4,550	8.57%
New York Post Holdings	4,937	3,952	24.92%
Boston.com ^{vi}	4,891	4,029	21.39%
MailOnline (UK) ^{vii}	4,645	4,137	12.28%
Daily News Online Edition	4,301	2,586	66.32%
NPR	4,282	3,327	28.70%

highlights the enduring power of institutional journalism. The top 30 news sites feature the big three news aggregators (Yahoo!, AOL, and Google), joined by upstart news aggregator/forum hybrid Topix, all of which rely on legacy media for the bulk of their content. The list features only one Web-native publication, Slate, currently owned by the *Washington Post*. The remaining 26 are national and local legacy media, in some cases represented by online hosting services.

There has been much debate over the journalistic merit of the selection methods used by *pure-play* news aggregators, which are not connected to journalistic organizations, and the danger that they will amplify the impact of unreliable nontraditional news sources. But the top mass-audience aggregators show no signs of challenging the role of professional journalism institutions in shaping the supply of raw news. The top news stories on AOL News, Google News, Yahoo! News, and the Huffington Post are drawn from well-known professional news organizations like the Associated Press, not anonymous blogs. In local news and topics like health or sports, aggregators draw on more diverse sources, adding in items from blogs and Web-native publications, but links to such sources are increasingly common on legacy news sites as well.

Table 2. Top 30 online current news destinations for July 2008.

ⁱ WorldNow provides video streaming, web publishing, and online sales services to local broadcasters, newspapers, and cable providers.

ⁱⁱ Advance Publications (<http://www.advance.net>) is a media holding company that owns Condé Nast magazines, Parade, and newspapers in 20 U.S. cities.

ⁱⁱⁱ Topix.com is an advertising-supported site that combines news aggregation and location-specific information with discussion forums and social media tools.

^{iv} Slate is owned by the Washington Post Company.

^v InternetBroadcasting (<http://www.ibsys.com>) builds and hosts websites for local television stations.

^{vi} Boston.com is the online presence of the Boston Globe, which is in turn owned by the New York Times.

^{vii} MailOnline is part of the Daily Mail, The Mail on Sunday, Evening Standard & Metro Media Group.

Source: Editor and Publisher, based on Nielsen ratings¹⁰⁴

Daylife's aggregation technologies allow Washington Post website users to customize their Olympics coverage.



The growth of the aggregator model has raised expectations among online audiences for endless choice, personalization, and constantly updated headlines. Legacy media increasingly aim to offer these options on their own sites. Ethan Zuckerman points out that the homepage of the *New York Times* online offers the a menu of approximately 20 times more stories (including not only text, but audio, slideshows, and video) than the front page of the printed paper.¹⁰⁵ Companies like Daylife and Publish2, which help sites generate collections of materials on specific topics from their own archives or the Web at large, are helping legacy media incorporate aggregation functions into their sites.

The promise of online news aggregation to survey thousands of sources and offer each user the perfect combination of news for his or her needs is far from being achieved. As users and systems get more sophisticated, there is every reason to expect that aggregators will be used in many more diverse ways.

Search: The Editor of the Moment

Search engines represent one more tool that allows news consumers to be their own editors. Like aggregation, search is clearly changing the way online audiences find news. Its impact will only grow as tools improve and become easier to use. Pew research indicate that search engines are used on a typical day by about 50% of Internet users, approaching the rate of 60% of Internet users of email most days.¹⁰⁶

Like well-engineered systems for online classified advertising, reliable and powerful online search is an innovation that legacy media companies mostly failed to deploy to their advantage in a timely way. Until recently, finding an article from a specific publication was usually done more efficiently through Google or Yahoo! than on the publication's own website. Larger legacy media sites have since improved their systems, as well as adding a variety of saved search features to allow users to follow specific topics using email, RSS, or personalized pages.

All online media, legacy and otherwise, acknowledge the enormous power of search in driving visitors to their sites, evidenced by the explosion of interest in search engine optimization (SEO). It is the popularity of search that inspires legacy media like the *New York Times* to incorporate aggregator functions; they know that motivated audiences are going to look for more information on important stories, so they offer links to other publications themselves, hoping to establish the habit of starting at the *New York Times* rather than Google.¹⁰⁷

Ethan Zuckerman has written eloquently on the danger that the increasing use of search as a generator of news deprives us of the power of the serendipity of coming across a news story on a topic that we didn't know we were interested in.¹⁰⁸ This is one of many considerations that should inform the development of more sophisticated models for online editing.

The growing importance of search and aggregation technology makes the development of metadata systems like the one being developed by the Transparency Initiative critical.

By providing an automated systems that allows for monitoring of the provenance of stories that turn up in searches, it will give both news consumers and new editors important tools to organize and assess content.¹⁰⁹

Social Bookmarking, Recommendation Engines: The Crowd as Editor

Digital networked technologies enable large groups to assume the role of the editor by amassing the opinions and preferences of anonymous individuals for specific stories. Ranking and bookmarking systems, such as Digg, Reddit, StumbleUpon, Technorati, Yahoo! Buzz, and Del.icio.us, have become an important part of the attention economy. Part of the phenomenon known as *social media*, these entities constitute yet another mechanism contributing to the setting of the news agenda. Wherever there are people able to command the attention of large groups, attempts to influence them will not be far behind; the marketing industry is rapidly incorporating social media into its toolkit for attracting consumer attention.”¹¹⁰

These new mechanisms are in their infancy. According to the News Consumption survey, only 5% of respondents had used websites such as Reddit or Digg to find news.¹¹¹ Because of the commercial potential inherent in any scalable technological system that attracts mass audiences, there is likely to be a great deal of resources invested in refining and popularizing these systems. The next big evolution of these technologies is likely to build on the success of *discovery* networks, the systems that allow Netflix, Amazon, and other online retailers to make recommendations by combining one individual's choices with data on others who made similar choices.¹¹²

As with many other popular online media innovations, the trend among legacy media is to try a little of everything. If audiences want to choose what to read based on what other people have liked rather than what an editor thinks is important, legacy media will help them. The use of popularity lists—most read, most emailed, most commented upon, most recommended—has spread rapidly among newspaper and other legacy media sites.¹¹³

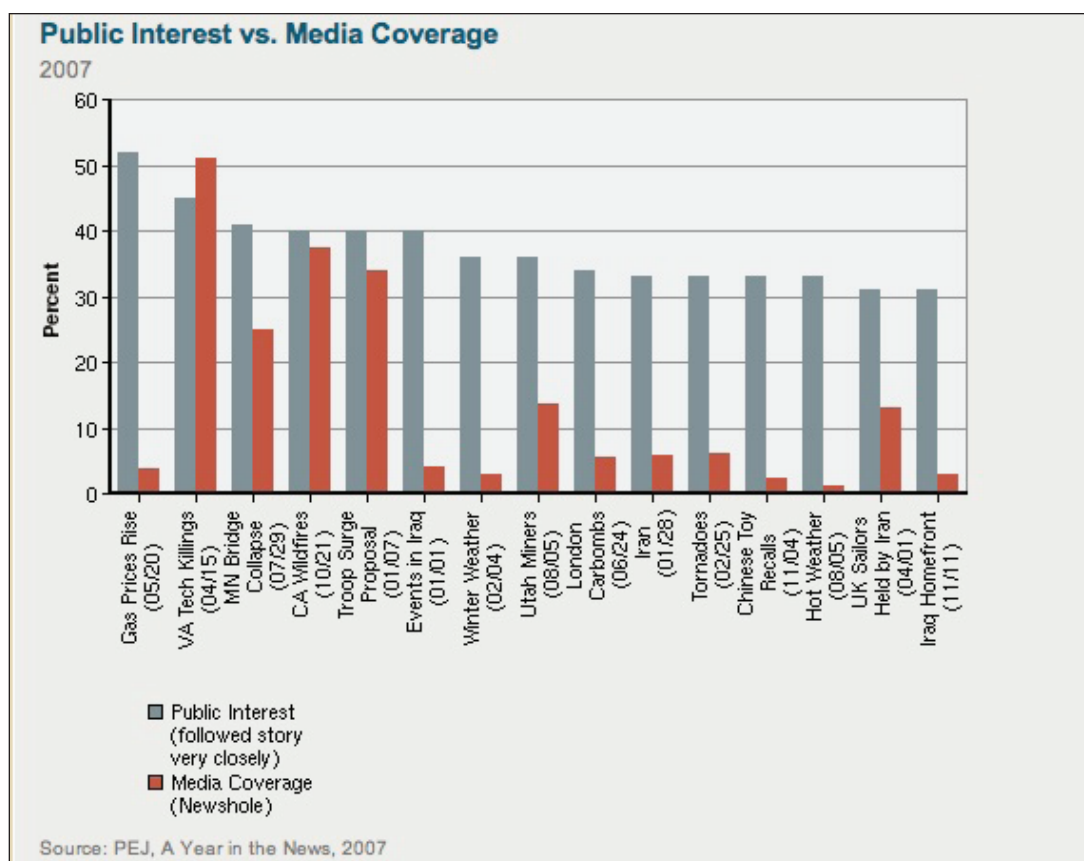
Filtering: The Network as Editor

We do not use the freedom that the network has made possible to plunge into the abyss of incoherent babble.
—Yochai Benkler¹¹⁴

Search engines, aggregators, online ranking and recommendation systems, email lists, blogs, discussion forums, and social media filter vast amounts of information. Stories and ideas travel back and forth between traditionally edited media and participatory media of all kinds. These networks, which comprise the *networked public sphere*,¹¹⁵ may take on aggregation functions, either deliberately or organically amplifying the attention paid to specific news stories or topics, pulling them out of the flood of information. Some believe that the collective influence of these networked tools can mitigate the problems of information overload.

The amplification of stories almost always attracts attention from legacy media, and is increasingly facilitated by them. Journalists within legacy media regularly monitor blogs and other online conversations, searching not usually for unreported stories but for a sense of the public *zeitgeist*.¹¹⁶ However, the trajectory from online obscurity to prominence in the mass-audience news agenda remains poorly understood. Even people who have been privy to the process say that they cannot predict the success of any given story on this path—there are too many variables. Nonetheless, the network effect has proven powerful enough that—like social media—it has become the object of keen interest from the public relations industry.

The many examples of networked digital media promoting important information and ideas from outside mass-audience media to prominence—based on their merit rather than their marketing budget—certainly make a case, as Yochai Benkler proposes and John Kelly's mapping of attentive clusters in the blogosphere supports, for viewing the networked media environment as a virtual social mind that produces something richer, more representative, and more open to ideas than the top-down mass media model of the past. But there is much to be determined about the ability of this self-organizing mechanism to reliably identify salient information, especially on topics don't get the intense scrutiny of popular issues like politics.

Figure 4. Public interest vs. media coverage by topic.¹¹⁷

Source: Project for Excellence in Journalism

Research shows regular disconnects between the interests of the public in specific issues and the amount and type of coverage of those topics receive in the media (see Figure 4). Although participatory and other Web-native media are clearly changing the rules of the game, it is still unclear whether they are addressing all gaps. In some cases, despite the existence of compelling information, an issue never achieves broad uptake in online media; in others, it is ignored by legacy media despite vociferous activity online.

Choosing Among New Editors

The Internet offers the opportunity for individuals to discover and select from an intoxicating array of information, stories, and opinions. In making these choices from resources such as aggregators, social media, recommendation tools, search engines, and media outlets, audiences are in effect choosing from among new editors.

Digitally delivered news may now be published in an edition of one, what Nicholas Negroponte evocatively christened the “Daily Me.”¹¹⁸ This personalized publication can be as long or short as the individual chooses; it can mix and match sources independent of geography, professional involvement, or commercial status. It can be updated continuously. This shift has been hailed as the triumphant and democratizing overthrow of the gatekeepers who artificially—even maliciously—limit our access to alternative viewpoints. It has also been bemoaned as the sure path to polarity and fragmentation, and the ascendancy of the lowest common denominator.

As the use of aggregation, personalization, and search and recommendation engines grows, legitimate concerns have arisen over the impact of shifting editorial models. If the voice of traditionally neutral news media is indeed losing its power, as many believe, then there is a real danger that challenges to misinformation will be ineffectual.¹¹⁹ However, there is scant empirical data to confirm or reject unanswered questions related to polarity, fragmentation, and credibility.

Another concern stems from the increasing levels of choice available online and the growing sophistication of new production tools. In contrast to basic levels of media literacy that sufficed to navigate the pre-Internet media landscape, the effective use of online media requires additional skills. This need suggests that there is a risk of increasing information inequality with an unknown but potentially detrimental impact on social cohesion and democratic processes.

Testing these hypotheses would require broad quantitative research into the impact of the use of various online news agenda-setting mechanisms on the specific information people consume. More study is needed at both the micro and macro levels, from understanding the ways individuals or specific groups use these new mechanisms to trying to determine their capacity and amplify certain kinds of stories and ultimately affect public opinion.

NEW CHALLENGES IN AN ERA OF CONVERGENCE AND DISAGGREGATION

If you are under 25, this net, this Web . . . this isn't something that is foreign to you, this is you. We are still thinking about it as something new, something different. [We need to] begin to understand that it is internalized, that it is not about new media versus old media—this is the media for everybody coming up. (emphasis added)
—Larry Irving¹²⁰

While the term “new media” continues to slide into obscurity, the blended digital media environment continues to be troubled by the same key issues that have been on the agenda since the blogosphere became a topic of discussion. One series of questions concerns the qualities of journalism: who is qualified to do it, how we know what to believe and whether the public is being well served. Other questions examine the upheaval in the structure of the media business and its impact on the survival of journalism.

Convergence

When people first began to consider the role of blogs and other participatory online media in the news environment, digital

technology was one of its defining features that distinguished it from traditional media. This is no longer true. As mainstream media expand online and the online environment becomes mainstream, distinctions based on technological platforms are not meaningful. Blogs, social media, interactive media, networked journalism, podcasts, amateur video remixes, microblogs, computer-aggregated news—all of these and many more are integral to companies that we still think of as newspapers, TV channels, and radio stations. Meanwhile, the Huffington Post, born on the Web, has paid professional staff and a fairly traditional hierarchy and calls itself a newspaper. There is no longer a distinct sphere of “new media” activity that stands in contrast or opposition from a monolithic and static one-to-many media sphere.

In parallel to the removal of technological distinctions, the line between traditional journalism professionals and amateurs such as bloggers and citizen journalists that seemed clear just a few years is blurring as well. Many of the best-known successful bloggers have “turned pro,” and professional journalists have made names for themselves as bloggers. Both Web-native publications and legacy media feature not only the work of paid professionals, but also content created by people who may not think of themselves as media professionals and may not be financially compensated for their work.

Disaggregation and Interdependence

The structure of the media world continues to shift as entrepreneurs, authors, and audiences take advantage of opportunities offered by digital networks. Online audiences are able to access news stories and other content selectively from multiple sources rather than in the packages of content and advertising defined by publishers, creating opportunities for many new digital media products. Aggregators, bloggers, social media, and participatory media sites are able to draw on an infrastructure of original reporting by news agencies and legacy media.

For newspapers, this disaggregation creates an enormous challenge, both editorially and financially, as specialized outlets compete for the attention of their audiences. Radio and television news organizations, whose newscasts are currently less easy to mix and match online, are less directly challenged; meanwhile, they are competing aggressively with newspapers and other text-based news providers for both audience and advertisers online.

Although the financial standing of large media firms is precarious, many independent online authors, editors, and distributors depend on legacy media news coverage. As John Kelly notes, “If anything the central role of professional journalism in the expanded economy of political discourse makes it valuable in new ways, and to the extent its near-monopoly on agenda setting and public representation is broken, its role as an honest broker of verified information becomes yet more important.”¹²¹ With the role of legacy media organizations as the primary news-gathering and agenda-setting institutions in flux, these new patterns of interdependence may offer new opportunities but also include serious risks.

The Impact on News Gathering

The financial and editorial challenges posed by the new environment have consequences for the supply of original news reporting and journalism, which have traditionally been supported as part of a package of varied content. Although there are conflicting views regarding the depth of the impact, there is little disagreement that the shrinking budgets of traditional news organizations, especially within newspapers, have reduced newsroom staffs and the amount of original reporting on certain topics. At the same time, even the most ardent proponents of citizen journalism acknowledge that serious journalistic investigations and comprehensive news gathering are difficult with an all-volunteer staff.

One of the distinguishing features of the three types of Web-native entities (*Aggregator*, *Author-centric*, and *Audience-driven*) is that they do not include certain editorial functions—most notably the capacity to assign stories. So although they may organize and highlight vast amounts of materials or collect numerous submissions from volunteer authors, they are not well positioned to generate consistent and comprehensive original reporting. This is especially true of breaking news stories. In practice, most online media focus on various combinations of specialized topics, soft news, or opinion. The Web-native media that have distinguished themselves in original reporting, such as Talking Points Memo and Salon, tend to emulate the structures of traditional media companies, with paid editors able to organize coverage by staff reporters.

The Attention Economy

Legacy media are accustomed to the reality that they are now competing directly with all forms of online media in the *attention economy*; by many measures, they are performing quite well—the websites of major newspapers and network and cable news operations all have large audiences. But the vastness of the online space and the dominance of search engines in online advertising mean that legacy media cannot generate the same revenues from online audiences as they commanded in the past. One of the characteristics of the attention economy is the granular level of the competition for audience—online platforms offer the ability to track the popularity of individual stories, potentially distorting editorial decisions in favor of topics and genres that have mass appeal.¹¹³

The attention economy is born from the plethora of choices now available to online audiences, shifting much of the weight of responsibility for ensuring a salient, balanced, accurate, and comprehensive news product from large media outlets to the audience. Concerns over audience fragmentation have arisen from the combination of the growing number of media choices and the increase in autonomous online voices not tempered by editors and institutions. However, the evidence to date has not confirmed any linkages between online news consumption and fragmenting audiences.

AMERICANS SHIFTING TO ONLINE NEWS SOURCES

While the percentage of Americans who read online news went from 18% to 25% between 2006 and 2008, the percentage who read newspapers daily has decreased from 40% to 34% during that same time period.

Source: Pew Research Center¹²²

MORE AMERICANS GOING NEWSLESS

Nineteen percent (19%) of Americans report getting no news (from any source) on a given day, up from 14% in 1998. In the 18-24 age group the differential is greater: 34% in 2008, compared to 25% in 1998.

Source: The Pew Research Center for the People & the Press¹²³

Reinventing the Concept of Coverage

In the legacy media model, editorial decisions—the topics, the geographic area, and the level of sophistication and detail—reflect the perceived needs of a target audience. Coverage in legacy media was also based the frequency of the specific news product—a daily paper or newscast was traditionally structured around the conceit that its audience may have seen or heard no other news in the 24 hours since the last edition. In the online model, those constraints are removed, and so are the familiar organizing principles they engendered. The short-term result is that authors, editors, and audiences alike are struggling to redefine responsibility for creating a balanced news diet. This task is increasingly falling to audiences themselves.

The Credibility Challenge Takes on a New Shape

The exploding popularity of media formats featuring amateur authors has prompted a debate over the past several years over the issue of credibility in the news media environment. In the blended media environment, this issue has become a challenge for legacy and Web-native media alike. In addition to any reactions to the substance and style, the credibility attributed to a news story derives from the audience's trust in the author and the publisher, and to some extent the sources cited in the story. Third party referrals also play a role, whether a friend, mailing list, blog, or recommendation site that led an individual to a story. Additional accreditation mechanisms begin after publication: the story as well as the author, sources, and publisher are subject to public scrutiny through comments, online reputation systems, or counter publications. Each of these components can be brought to bear to assess credibility in the evolving media space.

Innovative third-party systems—still in their infancy—are being developed to harness the judgment of the audience, ranging from the popular recommendation system Digg to the journalism evaluation platform [NewsTrust](#).¹²⁴ The Transparency Initiative aims to use metadata to improve the ability of computer aggregators and end-users to get more accurate information. As Dan Gillmor notes, the audience has always evaluated news sources based on many factors, but the new environment means that the evaluation process is more complicated and must be done for many more sources than in the past.¹²⁵ All of these approaches and more will need

to be complemented by an ongoing commitment to news literacy education. Even as more tools are being developed to help audiences navigate the evolving media environment, more sophistication than ever is required of them.

Setting New Standards for Access and Participation

As the center of gravity of the news media continues to shift toward digital platforms, the digital media space is increasingly taking on the role of the public sphere. As the costs of editing, reformatting, and redistributing content continue to drop, the possibilities for expanding media participation to underserved communities has never been greater. However, despite these opportunities and the superabundance of information online, digital media are not being used by many communities that have historically been underrepresented by the mass media. The barriers may be cultural as well as technical; unfamiliar participatory formats may prove daunting for potential consumers and producers of information.

The need to overcome barriers to access and participation concerns not only small minorities of the unwired and unengaged. It applies to patients trying to guess which health and science news can be trusted; busy parents who don't know where to find the blog that covers special education regulations or find it too hard to understand when they do; and students who are more likely to spend their time online with MySpace than a news site.

Navigating the Shifting Media Economy

If a newspaper is to be of real service to the public, it must have a big circulation, first because its news and its comment must reach the largest possible number of people, second because circulation means advertising, and advertising means money, and money means independence.

—Joseph Pulitzer¹²⁶

In 2005, the issue of viable business models for online journalism was seen as one of the major unanswered questions confronting the participatory media revolution.¹²⁷ The online advertising market has grown phenomenally since then, and many new online media businesses have been launched¹²⁸—some of them very successful—but the question of what

business models will support certain kinds of journalism remains as vexing in 2008 as it was in 2005. Depending on who is asking the question, it can be phrased in various ways:

- How can professional legacy news media—especially newspapers—restructure the costs of production and revenue streams to survive the structural changes in their specific medium?
- How can bloggers and other independent online authors make money to support their work?
- What structures will support news operations based on audience-contributed content and how will they be financed?¹²⁹

These are the wrong questions. They assume that one structure or another—traditional newspapers, blogs, user-generated content platforms—is the appropriate producer of journalism or news, and that the only challenge is to ensure that structure has the resources it needs to do its job.

If the ultimate goal is to strengthen democracy, rather than to preserve existing organizations or encourage new models for the sake of newness, the important questions are not about the future of bloggers, newspapers, or public radio or the proper roles of professional journalists or amateurs. The fundamental questions must take as their point of departure neither the capacity of producers or technological structures nor the desires of advertisers and consumers, but the information needs of citizens:

- What journalism—information, reporting, and discourse—is needed to fulfill the core functions of media in a democracy?
- How will it reach the greatest possible number of those who need it?
- What structures will reliably create that media?
- How can we, as a society, foster and sustain those structures, financially and otherwise?

Although media that aim to create journalism in the public interest face the same financial issues as more commercial projects, they will seek to design both cost and revenue structures that support the content they have identified as needed, rather than letting the desire to keep costs low or maximize profits determine the editorial model.

Diluted Revenues, Potential Cost Savings

The future of business and financial models for both legacy and Web-native media is deeply unsettled. The disaggregated and interdependent digital media landscape undoubtedly will be supported by a host of different revenue models, drawing on the work of paid professionals and volunteer contributors while distributing a mix of paid and free content.

Efforts to support online media have relied on a mix of the same revenue sources that have traditionally supported legacy media:

- Advertising and sponsorship tailored to the demographics of the audience
- Subscription, retail sales, cable fees, and other forms of direct payment for the media product
- Membership, voluntary contributions, corporate and foundation grants, and underwriting
- Ancillary business ventures that cross-subsidize news organizations, from the profitable entertainment media supporting news divisions to complementary ventures like the Economist's business conferences, and unrelated businesses like the *Washington Post's* ownership of Kaplan's educational services company.

Advertising has long been the dominant source of funding for media in the United States—more so than in other countries, where public or state broadcasters and newspapers owned by noncommercial structures play a larger role in the news environment.

There continues to be a significant audience and corresponding advertising market for news and information, as the success of the traditional news agencies in the digital environment illustrates. For the Associated Press, online aggregators and publications like the Huffington Post represent not the dangerous competition they are for newspapers, but a lucrative new client base.¹³⁰

Low-overhead content providers such as bloggers can benefit from what Jeff Jarvis calls the “link economy.”¹³¹ Republishers of stories that follow the etiquette of the link economy link back to the original source, sending visitors to the original author's site and its advertisers. This practice has become part of the ethos of the blogosphere and drives traffic to bloggers and media websites, rewarding popular work with advertising revenue. For legacy media, these incremental

online ad revenues are not enough to compensate for the loss of traditional advertising revenues like newspaper classifieds (see Figure 5).

Figure 5. Newspaper advertising revenue year-on-year change 2004–2008.¹³²



Source: Newspaper Association of America

Efforts to translate paid subscription models into the online space have also been generally abandoned by the general interest news media. A defining moment came when *The New York Times* decided to stop charging for online content. This followed other unsuccessful attempts to build a strong subscription base online. Slate's online subscription scheme lasted less than a year. Salon.com is currently using a hybrid model in which content is available for free after viewing a full-page advertisement; subscribers can skip the advertisements. More targeted publications and information services related to specialized topics ranging from professional journals to sports media have been more successful with paid subscriptions.

A shift in cost structures is also having a deep impact on the media world. Digital platforms make distribution of the news drastically cheaper than print and broadcast alternatives. Legacy media are seeking cost savings in their news operations through the expanded use of digital tools. However, traditional news rooms are slow to make these changes, and in the context of large legacy media, these savings are comparatively small compared to the costs of traditional delivery systems—printing and delivering newspapers and maintaining costly broadcast equipment.

All of these trends point towards the continued shrinking of larger news organization and ongoing innovation in the digital sphere. Divergent models are emerging for different markets. Hyperlocal and niche markets may survive with low-cost

production models that leverage audience participation in the more expensive aspects of news: reporting and editing. The path for medium size markets is less clear; both keeping costs low and drawing one a mix of revenue streams are likely to be a part of any solution.

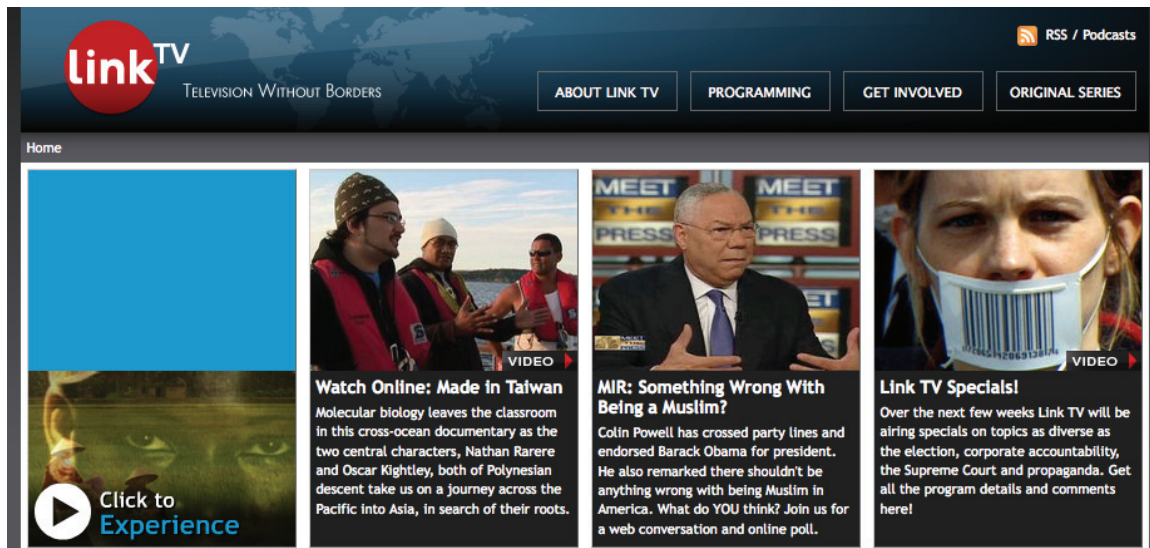
The Growth of Nonprofit Journalism

Nonprofit journalism and media institutions are viewed as one of the possible solutions to the budget cuts in legacy media and gaps in coverage, especially in international news and investigative journalism. Nonprofit centers have long played an important role in journalistic investigations and are the focus of renewed attention in an era of journalist layoffs.¹²² Government transparency organizations also support investigative journalists in all media, exemplified by the groundbreaking work of the Sunlight Foundation. Other nonprofit efforts focus on bringing international issues to U.S. audiences; examples include Link TV, Global Voices, and New America Media.¹²³

Many of these nonprofit media organizations are also leveraging audience-contributed content. Global Voices and WITNESS's video citizen journalism website, the Hub, are prime examples.¹³³ Global Voices, which refers to itself as a *bridgeblog*, attempts "to reach across gaps of language, culture and nationality to enable communication between individuals in different parts of the world."¹³⁴ A nonprofit media organization, founded by Ethan Zuckerman and Rebecca MacKinnon under the auspices of Harvard's Berkman Center for Internet & Society, Global Voices grew out of an international bloggers' meeting in December 2004. With blogs maintained by millions of people around the world, Global Voices aggregates, curates, and amplifies a selection of the interesting conversations going on in different segments of the global blogosphere, ranging from Afghanistan to Zimbabwe, with a particular focus on non-Western and underrepresented voices. One might find on its homepage, for example, Chinese bloggers talking about the Beijing Olympics, or Kenyan bloggers discussing the aftermath of the 2008 American election.

Although standalone not-for-profit journalism projects are growing and seem likely to play an increasingly important role in certain areas of journalism, the scale of current efforts is still relatively small. Launched in 2007, the new ProPublica investigative reporting organization was big news for proponents of nonprofit journalism in part because of its enviable \$10 million annual budget. But ProPublica's funding

Not-for-profit satellite channel LinkTV aims to connect Americans to the world.¹³⁵



and its cadre of two dozen journalists pale in comparison to the \$6 billion in advertising revenues collectively lost by U.S. newspapers over the past year and the estimated 2400 journalists who left newspapers in 2007.¹³⁶

One indication of the growing consensus that attracting significant new sources of philanthropic support for journalism is critical for the future is the initiative by the Knight Foundation to involve community foundations in the funding of local information projects. The project is based on the idea that information has become one of the core needs that community foundations should address.¹³⁷

Networked Approaches

Some of the most promising work on new business models is on the development of systems that take advantage of the unique features of the digital media environment. Some of these focus on restructuring production costs, and others are working on new mechanisms for gathering revenues:

- **Digital customization:** Creating personalized or highly targeted information products that can attract subscriptions and sell advertising at a premium.¹³⁸ These may be delivered not only online but on other media, including paper, electronic readers like Amazon's Kindle, podcasts, and so on.¹³⁹
- **Virtual organizations:** Using the network to build cost-effective journalism projects by recreating journalism

institutions and structures virtually. One example is [reporterist](#),¹⁴⁰ which helps freelance journalists with stories to pitch find editors to commission them.

- **Payment amalgamation:** Systems to collect small amounts of money, including tools for micropayments and voluntary contributions. Possible schemas include subscription models that offer access to materials from multiple sources, such as the model employed by Rhapsody.¹⁴¹
- **Crowdfunding:** Innovative projects that ask members of the public to fund journalistic projects, both on a one-time basis like Spot.Us¹⁴² and in the long-term service of a specific community, as in Len Witt's Representative Journalism¹⁴³ project.

These and other novel approaches aim to create truly new ways of organizing the work of journalism of all kinds and to create new mechanisms to harness public interest in quality information. Many of today's innovators are inspired by continued double-digit growth in online advertising, though the recent economic downturn is hurting online advertising as well. Some come to the problem from an interest in technological innovations, and others are motivated primarily by an interest in sustaining specific kinds of content. In the most optimistic scenario, these communities of interest will work together to create collective mechanisms for both media creation and funding that draw on the experience of the journalism profession and the energy of newly engaged participants.

ENABLING PARTICIPATORY MEDIA

A complete list of the innovations that have fueled the rise of participatory media would run to many pages. Listed below are some illustrative historical milestones from the last 15 years.¹⁴⁴

- 1993** The first [SMS](#) text message is sent, by Riku Pihkonen, an engineer at Nokia.¹⁴⁵
- 1995** Internet companies [Geocities](#) and [Tripod](#) launch webhosting services, allowing users to create and share their own home pages.¹⁴⁶
[Yahoo!](#) is launched.¹⁴⁷
- 1996** VocalTec, which offers the first consumer-friendly [VoIP](#) service, goes public.¹⁴⁸
- 1997** [Slashdot](#), a tech news aggregation service, is founded. Within a matter of years it surpasses over 1,000,000 users.¹⁴⁹
- 1998** [Google](#) is founded.¹⁵⁰
- 1999** [Blogger](#) is launched, popularizing the personal blog format.¹⁵¹
- 2000** Josh Micah Marshall launches [TalkingPointsMemo](#).¹⁵²
Dave Winer encloses a Grateful Dead song in his [Scripting News](#) weblog, laying the foundation for podcasting.¹⁵³
- 2001** [Wikipedia](#) is launched by Jimmy Wales and Larry Sanger, allowing nearly anyone to contribute to and edit to what has become the largest and most popular general reference work on the Internet.¹⁵⁴
Larry Lessig founds [Creative Commons](#) to offer a variety of flexible copyright licenses.¹⁵⁵
Six Apart releases blog publishing software [Moveable Type](#) to the public.¹⁵⁶
- 2002** [RSS](#) (Really Simple Syndication) - Dave Winer releases RSS 2.0, allowing people to easily aggregate a variety of blog feeds.¹⁵⁷
[DailyKos](#) is established by Markos Moulitsas.¹⁵⁸
[Technorati](#) is launched, making blogs searchable.¹⁵⁹
- 2003** [Del.icio.us](#), used to tag and share web sites, is founded by Joshua Schachter.¹⁶⁰
The word 'blog' is added to the [Oxford Dictionary](#).¹⁶¹
[WordPress](#) open source blog publishing software is released.¹⁶²
- 2004** The photography sharing site [Flickr](#) is founded by Ludicorp.¹⁶³
Mark Zuckerberg launches [Facebook](#) from his college dorm room.¹⁶⁴
Kevin Rose, Owen Byrne, Ron Gorodetzky, and Jay Adelson create [Digg](#).¹⁶⁵
- 2005** Steve Huffman and Alexis Ohanian found [Reddit](#), an open-source news aggregation site.¹⁶⁶
Apple creates its first Podcast directory for its [iTunes](#) store.¹⁶⁷
Three former PayPal employees create [YouTube](#).¹⁶⁸
- 2006** San Francisco start-up Obvious creates [Twitter](#) as an internal communication service. It launches to the public in October 2006.¹⁶⁹
- 2007** The [New York Times](#) abandons its subscription TimesSelect feature, opening its entire newspaper online for free.¹⁷⁰

CONCLUSIONS

Strengthening the public discourse, and strengthening democracy, is indeed the common ground shared by professional journalists, bloggers, wikipedians and others involved in the creation of grassroots media.

—Rebecca MacKinnon¹⁷¹

The recent upheavals in the media world brought on by expanding use of digital networked technology introduce many daunting issues, both at the individual enterprise level and at a larger structural level. Most of the challenges are linked directly to the disaggregation and disintermediation of the media business, which offer both new opportunities and new challenges to authors, editors, and audiences alike. We summarize here what we believe to be the most important of the looming challenges.

Whose job is it to report the news?

Threats to the public service mission of legacy media

The disruption of the advertising-based business model for traditional media is compelling them to reduce and shift the scope of their original reporting, with critical areas such as international coverage and watchdog journalism suffering the most. Newspapers especially are cutting resources devoted to news that is costly and less commercially viable: foreign bureaus, specialized beats including science and education, and long-form, in-depth investigative journalism.

Participatory are filling only some of the gaps

Meanwhile, Web-native media entities are not addressing all of the important reporting gaps left by legacy media, and there are insufficient incentives for them to do so. Although many thematic and geographic areas are being well served by combinations of participatory and professional online media, many others are not. There are many circumstances where the self-correcting network effect, in which an engaged community comprising both audience and authors, responds to gaps and corrects errors has not proven adequate.

Is the public getting the information it needs?

New media formats require new skills from the audience

The proliferation of online news sources means that the public has not only more choices but also more responsibility to locate credible reporting and assemble a coherent and complete news product. Those who lack the time, motivation, or skills to become discerning online news consumers risk relying on news sources that are neither credible nor comprehensive.

Online audiences may not easily find the authoritative news agendas they seek. New formats, with competing and confusing navigation and organizations systems, are accompanied by a flood of new forms of advertising and marketing, much of it purposely mimicking editorial content. This unpredictable environment has been shown to confuse and mislead inexperienced Internet users seeking information.¹⁷²

Information haves and have-nots: a widening gap?

Motivated and technically adept users have access to an unprecedented breadth and depth of information and benefit from the recommendations of their similarly advantaged peers, while less sophisticated users are shuttled into information ghettos convenient to advertisers, politicians, and others that promote a specific agenda. Research on the increased reliance on online news sources should examine the possibility that disparities in audience skill may have serious implications for their ability to stay informed.

The digital media sphere is not uniformly representative.

Despite its democratizing promise, the accessibility of the online media space has not changed the fact that many segments of the population remain underrepresented in the public sphere. Although many new groups have gained a voice due to the accessibility of participatory media, others do not participate online or are involved in online communities that remain isolated, their concerns not reaching the general public. Many of these patterns of marginalization or balkanization reflect cultural, social, and economic dynamics that predate the Internet; no one should be surprised that the Internet has not erased inequality overnight. But the ways that the digital media environment has changed patterns of media consumption suggest that online dynamics may alter social patterns as well. The positive potential of this deserves more exploration.

Although some would argue that participation in the online environment is an option, rather than a necessity, as Internet use grows, there is a risk that communities, issues, and points of view that are not present online may become less visible to the public at large. As journalists in all media rely more and more on Internet-based sources to define what they cover, being online is rapidly becoming equivalent to being part of society, and the concept of Internet access being as fundamental as access to electricity or telephone service seems less revolutionary every day.

There is little hard data on the influence of online media.

Efforts to address public needs for news and information and to evaluate their success are based on incomplete information, anecdote, and intuition, rather than empirical evidence. According to recent Pew studies, about a third of American adults regularly get news online; 5% get their news exclusively from online sources, but those numbers are growing quickly. We know far too little about how changes in the delivery and consumption of news are affecting public awareness, opinion and civic engagement. Much of the quantitative research being done is commercial—it is designed to answer questions about

consumers rather than citizens. It is usually commissioned by private clients and is prohibitively expensive. Finally, the impact of the shifting legal and regulatory regime should be monitored in the evolving digital media environment, as David Ardia explains in the sidebar “Understanding the Impact of the Legal Environment.”

Business models for public service journalism remain unclear.

Diverse legacy media companies are likely to survive the changes to their business, while many Web-native media enterprises will thrive. However, without the cross-subsidies inherent in traditional models, there is no guarantee that either will find it financially viable to cover the more expensive and time-intensive functions of journalism, particularly topics that do not command broad public demand. Identifying the combination of new models that will sustain journalism in the public interest is a challenge that will not be solved by any one group working alone—it requires engagement from a broad group of stakeholders that include expertise in business, technology, traditional media businesses, and both traditional and participatory journalism.

UNDERSTANDING THE IMPACT OF THE LEGAL ENVIRONMENT

If we wish to understand the changing media space, we need to study the myriad ways that the law affects the creation and dissemination of news and information.

These range from business formation decisions that influence the eventual success of new journalism ventures to legal challenges that force online publishers to forgo important avenues of reporting.

Unlike established media organizations that have the resources to seek expert legal advice, new media ventures typically share characteristics that make them particularly vulnerable to legal threats and coercion: they are often run by individuals or small groups not affiliated with larger organizations; they have little or no knowledge of media law; and they have limited financial resources.

Empirical research on the role law is playing

in journalism’s transition to online is essential to understanding what is happening in this space and to identify points of intervention.

Areas in need of specific investigation include:

- Which business forms are best suited to deal with non-hierarchical or cooperative online ventures? How has the choice of business forms affected the development of existing media projects?
- How is the disaggregated nature of liability for online speech, in which publishers and distributors of content bear different forms of liability, affecting media outlets? Have the immunity provisions in the Communications Decency Act (CDA) and Digital Millennium Copyright Act (DMCA) influenced journalistic decision making or success?

- Has a lack of legal assistance for digital media startups facing direct legal threats increased their fragility or changed the nature of their reporting?
- How is the existence of legal protections for anonymous speech affecting the source and quality of news and information available to the public?

Are antiquated open records and open meetings laws hindering the adoption of technologies that could provide alternative means for the dissemination of government information and compensate for cutbacks in traditional journalism institutions?

David Ardia, Director and Co-Founder, Citizen Media Law Project, Berkman Center for Internet & Society

Responding to the Challenges: Reinventing Journalism in the Public Interest

Looking to the future of journalism in the digital media age, there are many reasons to be optimistic. The power of new and emerging digital media technologies combined with the deep expertise of the best of the traditional journalism community has the potential to create a news and information environment that is richer, more engaging, and more representative than anything that existed previously, while ensuring the accuracy, balance, and completeness that are key to an informed population. However, this potential will not be realized without deliberate and coordinated efforts by a broad coalition of those dedicated to strengthening democracy.

Many of the successes of participatory media have been the result of very specific environments that nurtured their growth. Replicating their successes in geographic or topical areas with fewer inherent resources will require a proactive approach. Responses that build upon ideas and expertise from every possible sphere offer the best chance of success. Continued rigorous study is needed to understand large trends and evaluate small experiments; this analysis should proceed hand in hand with practical projects that are urgently needed now.

Much work that could inform new models for journalism is being done by groups with limited perspectives. Legacy media aim to attract or retain audiences, cut costs, or preserve existing staff. Technologists are improving tools to analyze and present data but rarely understand their potential for production and delivery of news. Creative entrepreneurs are developing models to monetize online attention without concern for the content involved. Thousands of civic-minded individuals and groups are launching separate online publications every minute, each with the idea that they have something unique to contribute and little awareness of similar efforts.

The sum of these isolated and competing efforts is unlikely to solve the problems outlined previously. Deliberate cross-pollination of groups with different skill sets and motivations is needed to create innovative and effective new institutions that put the goal of an informed public first and have the technical, financial, and human resources to produce high-quality results. These hybrid approaches will combine an understanding of the value of professional standards and organized editorial structures with the energy and new perspectives that

participatory media can offer and the expertise and openness to make use of the most appropriate technologies available. Some of the possible responses are described next.

Strengthen emerging media organizations by consolidating collective expertise and supporting common operational resources.

Thousands of small public service media projects working in isolation could be more effective and more likely to survive if they were better able to tap into know-how already extant in successful news organizations, including work being done outside the United States. Modest investments in collective knowledge networks and shared infrastructure for operating media organizations could have huge payoffs in the propagation of successful models, especially the development of productive partnerships. Possible projects would include:

- Proactive matchmaking aimed at encouraging partnership, integration, and collaboration within and between for-profit and nonprofit media.
- Technical tools and training to help nonmedia organizations use digital media effectively.
- The promotion of new civic media collaborations with a shared skills base by bringing together potential participants for locally based, affordable, in-person workshops.
- Networks to provide tools and services that small media projects cannot recreate or maintain on their own. These might include virtual editorial services; business, technology and legal help desks; and distribution of content and other tools to build audiences. A sliding-scale nonprofit consultancy network could offer to media projects individualized recommendations on practical and appropriately scaled editorial, technical, financial, and organizational solutions, including advice on setting and meeting realistic goals.

Prioritize investment in tools and institutions that connect information and publics

There are many areas where bridging gaps between information and audiences can have powerful effects, leveraging the underutilized potential of digital media to tailor media for

specific audiences. Investments in this area should focus on identifying the unmet information needs of specific audiences, seeking quality sources for that information and making it accessible through all possible means, including legacy media when appropriate. Often curating will be enough. In other cases, translating or contextualizing or other editorial functions will be needed to make sense of information from NGOs, community groups, academia, citizen media, or government sources.

In addition to bringing the news to audiences that need it, work is also needed to bring audiences to the news. Projects to raise public awareness of traditional journalism values and their application in the digital media space should focus on audiences that are currently shifting their news consumption online. These efforts should serve both active and passive news consumers.

Depending on the characteristics of the target audience, the bridging functions might be done by existing media or nonmedia institutions. Projects might include:

- Research to determine the information needs of specific communities and inform efforts to make existing information more accessible.
- Specialized editors who selectively repackage materials from sources such as New America Media, Global Voices, and think tanks, promoting their work to specific audiences.
- Experts in various specialties recruited to serve as editors and translators between their fields and general audiences.
- Expanded efforts to educate audiences of all ages and levels of sophistication in news literacy.

Focus public service journalism on underreported issues

The U.S. news media have never been and will never be perfectly democratic; special efforts have always been needed to promote media that represent the concerns of disadvantaged groups. This continues to be true as media migrate online. Despite the potential for greater participation in media creation across society, it is unreasonable to infer that all communities can or will take charge of their own information needs.

Efforts are also needed to promote reporting of global stories that are increasingly relevant in an interconnected world and to support the large-scale networked reporting projects that are made possible by the networked public sphere. There is

a need for institutions that look at what topics are not being covered by existing media and seek mechanisms to promote that coverage.

Illustrative projects that might address these issues and populations include:

- Editors who use geographic or thematic news media audits to identify where reporting in specific areas is lacking and proactively commission coverage to be distributed to a variety of media.
- Monitoring the representation of marginalized communities in both legacy and participatory media to inform efforts to boost participation and build bridges between niche media and the broader public.
- New institutions that take on the role of assignment editor, coordinating existing media efforts in order to reduce duplication of efforts and produce more comprehensive coverage of an area or topic.

Develop a more nuanced understanding of the evolution of the news environment

As the importance of online-delivered news grows, it is critical that projects to promote journalism in the public interest have better information on how people select and process information. Given the vast array of choices in exposure, attention, and consumption for the online news audience, improving our understanding of the behavioral aspects of consumers is critical when considering interventions in public interest media. The Pew Research Center for the People and the Press is an important resource on the national level, and its Biennial News Consumption Survey is an interesting model; similar questions need to be explored on the local level, in specific news environments. The Associated Press ethnographic study is an example of another kind of individual news consumption study that may also shed some light on these questions.¹⁷³

Research must go beyond surveys to include direct observation of how individuals use and understand online information and explore the role of different kinds of interaction. Studies should also test the success of different online models in engaging user interest and increasing the diversity of information and topics. These would provide a baseline for evaluation of emerging models. Research in the United States should be coordinated with comparable studies

in countries with stronger public news media and different patterns of information technology use. Existing research on online media should be supported by a data clearinghouse built around a shared directory of sites. The kinds of research that could inform the effective execution of the interventions might include the following:

- Testing the effectiveness of various new journalism formats in conveying different kinds of information to different groups: determining what engages people, what causes people to retain information, and what inspires action.
- Community-based news consumption studies to correlate exposure to and consumption of a mix of news sources with audiences' awareness of and interest in a full spectrum of issues, from local to global.¹⁷⁴
- Evaluation of the effectiveness of different participatory media forms in promoting increased news literacy, including how systems that convey information about the sources of specific materials are perceived by audiences of different levels of sophistication.

Moving Forward

After a year spent talking to stakeholders across a broad spectrum of media and technology enterprises, overall we are optimistic. We believe that the combination of new and emerging digital media technologies with the deep expertise of the best of the traditional journalism community has the potential to create a news and information environment in the United States and other countries that is richer, more engaging, and more representative than anything that existed previously. We believe it is both critically important and possible to achieve this in ways that ensure the accuracy, salience, balance, and completeness that are key to an informed population. But we fear that neither the free market nor the wisdom of the crowds will make this happen organically; it will require resources and coordinated efforts from a broad spectrum of people and organizations who care about the future of democracy, including many who previously considered the news media to be outside their area of interest.

Like the members of the Commission on the Role of the Press in a Democracy convened by the Annenberg Foundation

in 2005¹³⁹ and many other thoughtful people who are looking at these questions, we believe that entities not driven by the need for profit are destined to play a much larger role in the support of quality news media going forward than they have previously. These new nonprofit media entities will likely be funded by a mix of models including: crowdfunding, community and national philanthropy, advertising, and the use of related businesses to cross-subsidize expensive reporting. The best models will harness the positive energy of professional competition and the most effective management while ensuring that important editorial decisions are not driven by the need to increase profits quarter after quarter. The promise that the new digital media environment can enable a more just, tolerant, and democratic society is real, but it is not magic. Like all efforts to improve our world, it will require commitment and hard work.

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¹⁷ The specific challenges facing public broadcasters are described in Pat Aufderheide and Jessica Clark's paper for Media Re:public, "Public broadcasting and public affairs: Opportunities and challenges for public broadcasting's role in provisioning the public with news and public affairs" (Cambridge, MA: The Berkman Center for Internet & Society, 2008).

¹⁸ Amanda Lenhart and Susannah Fox, "Bloggers: A portrait of the Internet's new storytellers," Pew Internet & American Life Project, Reports: Online Activities and Pursuits, July 19 2006, http://pewinternet.org/PPF/r/186/report_display.asp.

¹⁹ Rick Edmonds, Rober Ruby, Cathy Taylor, and others, "The State of the News Media 2008: An Annual Report on American Journalism," Project for Excellence in Journalism (Washington, D.C.: 2008), <http://www.stateofthenewsmedia.org/2008/>.

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¹⁰⁰ Carol C. Darr, Joseph Graf, editors, "Poli-fluentials: The New Political Kingmakers," *Institute for Politics, Democracy, & the Internet*, George Washington University, October 4 2007, <http://www.ipdi.org/UploadedFiles/Polifluentials%20Report%20-%20Final.pdf>.

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¹⁰² The many possible characteristics of these groups – large or small,

persistent or temporary, homogenous or diverse, linked by social connections or strangers, with persistent identities and reputations or not – lead to many different variations of this phenomenon that we are just beginning to explore.

¹⁰³ Reader's Digest, with a circulation of about 10 million, has long been in the top three magazines nationwide, usually in second place after AARP: The Magazine. See <http://www.foliomag.com/2007/first-half-2007-mri-audience-numbers-released-for-the-most-recent-figures>.

¹⁰⁴ Jennifer Saba, "EXCLUSIVE: Top 30 Most popular News Outlets on the Web for July," <http://www.editorandpublisher.com>, (accessed July 2008, subscription required for access).

¹⁰⁵ "The front page of The New York Times contains, on average, references to roughly 20-25 stories inside the newspaper. These references can be thought of as hyperlinks – readers may follow some or all of them to access content elsewhere. The front page of the online edition of The New York Times (<http://nytimes.com>), by contrast, contains over 400 links from which a user can choose." Ethan Zuckerman, "International News: Bringing About the Golden Age," Media Re:public project (Cambridge, MA: The Berkman Center for Internet & Society, 2008).

¹⁰⁶ Deborah Fallows, Data memo re: search engine use, Pew Internet & American Life Project, http://pewinternet.org/pdfs/PIP_search_aug08.pdf.

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¹⁰⁹ Media Standards Trust Transparency Initiative, <http://www.mediastandardstrust.org/projects/transparency.aspx>.

¹¹⁰ Ian Lurie, "You Can't Separate Social Media and SEO," Ian Lurie's Conversation Marketing blog, July 21 2008, <http://www.conversationmarketing.com/2008/07/you-cant-separate-social-media-seo.htm>.

¹¹¹ "Audience Segments in a Changing News Environment," Biennial News Consumption Survey, The Pew Research Center for the People & the Press, August 17 2008, people-press.org/reports/pdf/444.pdf.

¹¹² The potential for discovery as a way to recommend news stories inspired the University of Missouri Journalism School to invite Chris Lam, founder of Aggregate Knowledge, whose Pique Discovery Network promises to connect "consumers to the hottest products, hidden content gems and coolest items from industry leading retailers," to speak at the centennial celebration of the country's best-respected journalism education institution.

¹¹³ Local newspapers and TV stations alike tend to use Web development and hosting companies that provide services to multiple entities, so as features are made available by these services, they appear nearly simultaneously on dozens or hundreds of sites.

¹¹⁴ Yochai Benkler, *The Wealth of Networks: How Social Production Transforms Markets and Freedom* (New Haven: Yale University Press, 2006), p. 255.

¹¹⁵ Based on Jurgen Habermas's public sphere. See L.A. Friedland, T. Hove, and H. Rojas, "Transnationalisation of the Public Sphere," *The Networked Public Sphere*, Vol. 24 (No. 4), pp. 5-26.

¹¹⁶ Justin Rood, phone interview.

¹¹⁷ Rick Edmonds, Rober Ruby, Cathy Taylor, and others, "The State of the News Media 2008: An Annual Report on American Journalism," Project for Excellence in Journalism (Washington, D.C.: 2008), <http://www.stateofthenewsmedia.org/2008/>.

¹¹⁸ The idea of the "Daily Me" has since inspired much discussion, from Cass Sunstein's eloquent warnings of the dangers of polarization to David Weinberger's nuanced arguments on the value of conversation among likeminded people.

¹¹⁹ A recent example is the continued repetition by Sarah Palin of her version of the "Bridge to Nowhere" story after its inaccuracies were detailed extensively in the media, including in The New York Times two full days before her speech at the Republican convention. See David D. Kirpatrick and Larry Rohter, "Account of a Bridge's Death Slightly Exaggerated," *The New York Times*, August 31 2008, http://www.nytimes.com/2008/09/01/us/politics/01bridge.html?_r=1&emc=eta1.

¹²⁰ Larry Irving, President and CEO of Irving Information Group, former Assistant Secretary of Commerce for Communications and Information. Keynote speech at Beyond Broadcast conference, American University, June 17 2008. See http://www.centerforsocialmedia.org/files/pdf/Larry_Irving_remarks_BB08.pdf.

¹²¹ John Kelly, "Pride of Place: Mainstream Media and the Networked Public Sphere," Media Re:public project, (Cambridge, MA: The Berkman Center for Internet & Society, 2008).

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¹²³ *ibid*.

¹²⁴ NewsTrust (<http://newstrust.net>).

¹²⁵ Dan Gillmor, "Principles for a New Media Literacy," Media Re:public project, (Cambridge, MA: The Berkman Center for Internet & Society, 2008).

¹²⁶ Alleyne Ireland, *An Adventure With A Genius: Recollections Of Joseph Pulitzer* (New York: E.P. Dutton & Company, 1914), p. 115.

¹²⁷ Rebecca MacKinnon, "Blogging, Journalism, & Credibility: Battleground and Common Ground, Final Report," (Cambridge, MA: The Berkman Center for Internet & Society, 2005), http://cyber.law.harvard.edu/publications/2005/Blogging_Journalism_Credibility.

¹²⁸ Internet advertising in first quarter of 2008 was \$5.8 billion, an astonishing 207% of the \$2.8 billion reported in first quarter 2005.

¹²⁹ See the *Chi-Town Daily News*, *Gothamist*, and *Forum* cases for three contrasting answers to this question.

- ¹³⁰ The fact that AP is a noncommercial cooperative owned by its newspaper members complicates its ability to take full advantage of its enviable position.
- ¹³¹ Jeff Jarvis, "The imperatives of the link economy," *BuzzMachine*, July 28 2008, <http://www.buzzmachine.com/2008/07/28/the-imperatives-of-the-link-economy/>.
- ¹³² Originally accessed at Researchwikis, "Newspapers and News Organizations Marketing Research," http://www.researchwikis.com/Newspapers_and_News_Organizations_Market_Research. Additional data from the Newspaper Association of America, <http://www.naa.org/TrendsandNumbers/Advertising-Expenditures.aspx>.
- ¹³³ The Hub (<http://hub.witness.org>).
- ¹³⁴ Ethan Zuckerman, "Meet the bridgebloggers," *Public Choice* Vol. 134, Nos.1-2 (January 2008), <http://www.springerlink.com/content/7812b54766014436/>.
- ¹³⁵ LinkTV (<http://linktv.org>).
- ¹³⁶ Rick Edmonds, Rober Ruby, Cathy Taylor, and others, "The State of the News Media 2008: An Annual Report on American Journalism," Project for Excellence in Journalism (Washington, D.C.: 2008), <http://www.stateofthenewsmedia.org/2008/>.
- ¹³⁷ See Alberto Ibarguen's talk on the foundation's aims at http://www.knightfoundation.org/news/press_room/knight_press_releases/detail.dot?id=330912.
- ¹³⁸ This may include very specialized information, like the State House News Service (<http://www.statehousenews.com/public>). See also (<http://rivals.com>), which sells subscriptions and advertising.
- ¹³⁹ See Daily Me (<http://www.Dailyme.com>), which sends a personalized publication to your home printer every day.
- ¹⁴⁰ reporterist (<http://reporterist.com>).
- ¹⁴¹ Rhapsody (<http://www.rhapsody.com>).
- ¹⁴² At Spot.Us (<http://spot.us>), journalists pitch story ideas online and members of the public can make contributions to fund stories that interest them. Spot.Us provides editorial supervision and also helps place stories in the media. A similar project to fund documentary film projects is ReelChanges (<http://www.reelchanges.org>).
- ¹⁴³ The pilot project supplies a single professional reporter with virtual editorial supervision to serve a geographic community, which eventually should fund the reporter's salary. See <http://pjnet.org/representativejournalism/>.
- ¹⁴⁴ The terms and organizations in this timeline may be found at <http://cyber.law.harvard.edu/mediarepublicforum/Glossary> and at the links below.
- ¹⁴⁵ Charles Arthur, "Video on your mobile phone? Forget it, says Vodafone chief," *The Independent*, September 8 2001, <http://www.independent.co.uk/news/business/news/video-on-your-mobile-phone-forget-it-says-vodafone-chief-668581.html>.
- ¹⁴⁶ Geocities (<http://geocities.yahoo.com/>), Tripod (<http://www.tripod.lycos.com>).
- ¹⁴⁷ Yahoo! (<http://www.yahoo.com>).
- ¹⁴⁸ VoIP (<http://www.vocaltec.com/>).
- ¹⁴⁹ Slashdot (<http://slashdot.org/>).
- ¹⁵⁰ Google (<http://www.google.com>).
- ¹⁵¹ Blogger (<http://www.blogger.com>).
- ¹⁵² TalkingPointsMemo (<http://www.talkingpointsmemo.com/>).
- ¹⁵³ Dave Winer (<http://www.scripting.com/>). See also "Podcast History," http://www.podster.co.nz/what_is_a_podcast/Video_Podcast_History/Video_Podcast_History.html.
- ¹⁵⁴ Wikipedia (<http://wikipedia.org/>).
- ¹⁵⁵ Creative Commons (<http://creativecommons.org/>).
- ¹⁵⁶ Moveable Type (<http://www.movabletype.org/>).
- ¹⁵⁷ RSS (<http://www.whatissrss.com/>).
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- ¹⁷⁰ "NYTimes.com Ends TimesSelect and Opens up Content for Free," The New York Times Company Press Release, September 17 2007, <http://phx.corporate-ir.net/phoenix.zhtml?c=105317&p=irol-pressArticle&ID=1052447>. See also Jeff Jarvis, "Times deselected," *Buzzmachine*, September 17 2007, <http://www.buzzmachine.com/2007/09/17/times-deselected/>.
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