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THE WIRED WORLD: A PRIMER ON ELECTRONIC
RESEARCH, WIKIPEDIA, SOCIAL NETWORKING SITES, AND WEB
JOURNALISM

by

Ryan F. Love

A THESIS

Presented to the Faculty of
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Under the Supervision of Professor Mary Kay Quinlan

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THE WIRED WORLD: A PRIMER ON ELECTRONIC
RESEARCH, WIKIPEDIA, SOCIAL NETWORKING SITES, AND WEB
JOURNALISM

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University of Nebraska, 2010

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The Internet initiated profound changes that are difficult to contextualize. Having grown up with the Internet, young people are particularly likely to perceive the wired world as a given condition, rather than the result of a developmental process. To understand and shape our society, people must see how the Internet has transformed it. After an introduction, this thesis contains three more chapters, focusing on electronic research and Wikipedia, social networking sites, and journalism. The text provides contextual understanding by describing the revolutionary changes that brought these areas to where they stood in May 2010.

The introduction discusses various uses of the Internet, describing how major Web tools functioned at the time of writing. It also explains four principals that detail how the Internet effects change.

The research chapter compares the revolution of the printing press to the Internet's effects. The benefits and drawbacks of electronic research are explained. The chapter provides guidance for how to search for sources and evaluate their credibility. Finally, the chapter discusses Wikipedia's evolution through peer production and its quality.

The chapter on social networking sites discusses their brief history and focuses largely on Facebook and Twitter. Controversies discussed include the sites' effects on offline communication, privacy issues, and cyberbullying. The political and marketing uses of social networking sites are also explored.

The chapter about journalism explains the history of news on the Web and how the Internet has transformed journalism. Topics covered include the impact of the 24-hour news cycle, audience segmentation, blogs, news aggregation, citizen journalism, and the search for 21st century business models that can sustain newspapers.

This introductory text provides overviews of these topics. The author, a professional educator, explains complex issues in everyday language and provides concrete examples to demonstrate concepts. The text assumes no prior knowledge on the part of the reader and will prove useful for readers of any level—be they high school or graduate students.

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Dedicated to
my parents, who raised me;
James G. Russell, Fiona Tolhurst and Paul Strong, who taught me;
and Sara Schnick Love, who put up with me.

Table of Contents

Preface	1
Chapter One: Introduction	5
Growth of the World Wide Web.....	7
Uses of the Internet	11
Search Engines.....	13
News	16
Shopping	20
Social Networking	24
Entertainment Media Online: Music, Movies, and Television	28
Four Principles of the Internet	32
Key Terms.....	38
Review and Discussion Questions	39
Chapter Two: Research, Credibility, and Wikipedia	41
Knowledge in Transition: Encyclopedias and the End of Print.....	45
Reshaping Research: What the Printing Press Tells Us of the Future.....	49
Leaping Forward: The Transition from Scribal Culture	51
Printing Press and Internet Parallels	55
Pitfalls of Electronic Research.....	64
Considerations for Online Research	75
What Sources Should I Use?.....	75
How Should I Search for Sources?	83
How Do I Evaluate the Credibility of Sources?.....	88
Evaluating Credibility: Examples	96
Wikipedia.....	101
The Development of Wikipedia.....	101
Wikipedia and the Crowd: Strengths and Weaknesses.....	104
The Accuracy of Wikipedia	110
The Usefulness of Wikipedia.....	112
Conclusion	115
Key Terms.....	118
Review and Discussion Questions	118

Chapter Three: Social Networking.....	125
History of Social Networking Sites	127
Controversy over Social Networking Sites.....	135
Inappropriate Material and SNS	136
Friendships on SNS: Meaningful or Meaningless?	137
Safety and SNS	144
SNS and Identity: Benefits for Teens	147
SNS and Privacy	150
Cyberbullying	157
Are Social Networking Sites Useful, or Just a Waste of Time?	160
Political Uses of SNS.....	162
Marketing Uses of SNS	167
News Uses of SNS	172
Conclusion	173
Key Terms.....	177
Review and Discussion Questions	178
 Chapter Four: Journalism.....	 180
How Newspapers Make Money.....	183
The History of News on the Web	184
The Internet Develops Trends in Journalism: The 24-Hour News Cycle and Audience Segmentation	194
The Internet Innovates Journalism.....	204
News Aggregators.....	205
Blogs	211
Non-Professional Journalism	219
Are Bloggers, Aggregators, Citizen Journalists, and Online News Killing Newspapers?	227
The Future of Professional Journalism	232
Conclusion	246
Key Terms.....	250
Review and Discussion Questions	251
 Works Cited.....	 253
Chapter One Citations.....	253
Chapter Two Citations	255
Chapter Three Citations	259
Chapter Four Citations.....	265

Figures

Chapter One

Figure 1.1: Transatlantic communication times for Declaration of Independence	6
Figure 1.2: Number of Websites, 2003-2009.....	8
Figure 1.3: Percentages of adults with broadband and dial-up Internet access	9
Figure 1.4: Prevalence of some online activities	12
Figure 1.5: Google results with sponsored links.....	15
Figure 1.6: <i>Steuben Courier</i> homepage	17
Figure 1.7: <i>USA Today</i> homepage	18
Figure 1.8: Customer reviews on Amazon.com.....	22
Figure 1.9: Used books for sale in the Amazon marketplace	23
Figure 1.10: Facebook page of Lance Armstrong	25
Figure 1.11: Twitter homepage of rlove327	26
Figure 1.12: Pandora Radio Station	31

Chapter Two

Figure 2.1: Card catalogue at Yale University.....	42
Figure 2.2: Illustration of Gutenberg examining a proof from his printing press	50
Figure 2.3: Copernicus.....	54
Figure 2.4: Citations within an EBSCO database	72
Figure 2.5: Comparison of print and electronic information	74
Figure 2.6: Selecting sources for different kinds of information.....	82
Figure 2.7: Search options within an EBSCO database.....	88
Figure 2.8: Excerpt from Wikipedia entry on American Civil War	104
Figure 2.9: Semi-protected Wikipedia entry.....	109

Chapter Three

Figure 3.1: Tom Hanks' MySpace page	131
Figure 3.2: Traditional bullying vs. cyberbullying	159

Chapter Four

Figure 4.1: News audiences for different media	193
Figure 4.2: Hudson River Twitpic photo by Janis Krums	220
Figure 4.3: A Guardian expense report feedback page.....	225

PREFACE

I grew up during a curious historical period: my generation was the last to experience life before the dominance of the Internet. I remember a *Weekly Reader* article about the Web, and the teacher afterward asking my sixth grade class who had the Internet at home. Out of approximately twenty students, only one raised her hand.

Three years later, I and nearly all of my friends had Internet access. We were young enough that Internet use became second nature to us, but old enough to remember that the Internet did not always rule the world. We were there when “mp3” became a common term, when emoticons developed in Instant Messenger, and when broadband made the scratchy sounds of modems archaic.

Fifteen years after my sixth grade class, I am a teacher myself, and my high school students have no conception of how much the world has changed in that time. This limits their ability to see how the world continues to change. Caught up in the onslaught of new software and devices, they have never considered how these changes are affecting them and their world. They lack the necessary perspective. If they better understood the transformative power of the Internet, they would be better equipped to navigate the world it is creating.

This problem is not limited to high school students. Undergraduates and adults, too, struggle to place the wired world in context. With change moving at hyperspeed, people can easily lose track of where things stood just a short time before. Facebook, for instance, is a giant of the Web today, with a number of users that dwarfs the population of most countries. But just five years ago, Facebook was a tool known only to college students. Five years before that, the idea of a “social networking site” was experimental.

Facebook rose that quickly, and other Websites and companies have fallen just as quickly. Similarly, within a space of ten years, blogging went from being an obscure practice to a polarizing force in journalism to a widely accepted part of the media landscape. The Web changes so rapidly that the word “history” scarcely seems to apply. With so much movement in so many directions, few take the time to retrace steps. Simply figuring out where to mark “you are here” on the map of Internet development requires thought, let alone reconstructing the way the map used to look.

The past can, however, be remembered. People can chart the present position, too—so long as they accept that the “present” will have become the “past” by the time they finish.

I wrote this text in the hope of creating such a map. My goal is to illustrate where a few aspects of the Internet stood in May 2010, and to explain how they got there. I hold no illusions that I can explain everything there is to know about the Internet. Rather, I offer a primer that can prepare readers to follow future developments. One can easily find updates, but understandable background knowledge and context are harder to come by. Articles about the Internet and Web tools often seem to be written for the tech-savvy, assuming that readers already know technical terminology and have followed developments for months or years. This book, on the other hand, makes no such assumptions. While staying true to the complexity of the subject matter, I wrote the most reader-friendly text I could so that my high school students and my colleagues alike could find it valuable.

Chapter One begins with very basic information, detailing the growth of the World Wide Web and the expansion of Internet access. The chapter then briefly

describes a few uses of the Internet. This introduction provides background knowledge for those who have not kept fully up-to-date with the Internet; it also provides background knowledge for future readers who might have had vastly different experiences with the Internet. Chapter One also sets forward four principles of the Internet that explain how the Internet has led to change.

The remaining chapters focus on a few of the most common uses of the Internet. Chapter Two examines the Internet's impact on the retrieval of information, focusing on academic research. The chapter discusses how the Internet can be likened to the printing press and draws several parallels to describe both the present and future possibilities. The chapter then offers recommendations for electronic research that reflect the current environment. Finally, Chapter Two discusses Wikipedia, which has achieved a prominent position on the Web despite controversy surrounding it.

Chapter Three examines social networking sites like Facebook and Twitter. With booming numbers of users, social networking sites seem positioned to dominate the Web for years to come, and their full potential remains to be seen. The chapter describes the history of social networking sites, then explains the controversies about them. Chapter Three concludes by explaining how innovators have used social networking sites for purposes beyond socializing.

Chapter Four discusses how the Internet has affected journalism. Getting news is among the most common uses of the Internet, and the movement of news organizations and readers to the Web has profoundly altered the media landscape. Some commentators view the Internet as invigorating journalism; others view it as hastening journalism's demise. Chapter Four begins with a history of news on the Web, then explains several of

the effects the Internet has had on news reporting and consumption. The chapter examines the notion that the Internet is “killing” journalism, then discusses several possible models that commentators believe the news business might follow in the future.

These chapters do not come close to covering all there is to the wired world, but they introduce readers to a number of issues relating to fundamental uses of the Internet. I hope my readers find this helpful, and that it gives them the contextual understanding needed to explore the included topics further.

CHAPTER ONE: INTRODUCTION

Before you start reading...

Take a few moments to think over your use of the Internet.

- How old were you when you began to use the Internet regularly?
- About how many times did you access the Internet in the past week?
- How much time did you spend online in the past week?
- Create a list. For what purposes have you used the Internet in the past week?
(e-mail? Getting directions? Facebooking? Shopping? Listening to music?
Etc.)

Share responses as a class.

The reasons for the Internet's influence can perhaps be best understood by going back about 200 years to the War of 1812. The last major fighting of the war came on January 8, 1815, at the Battle of New Orleans. General Andrew Jackson led the American troops to victory. The battle was significant not only because hundreds of men were killed or wounded, but because Jackson became famous after it and began his rise to the presidency. The battle did not, however, affect the outcome of the war, which had actually ended two weeks earlier. The Treaty of Ghent had been signed in Europe on December 24, 1814.

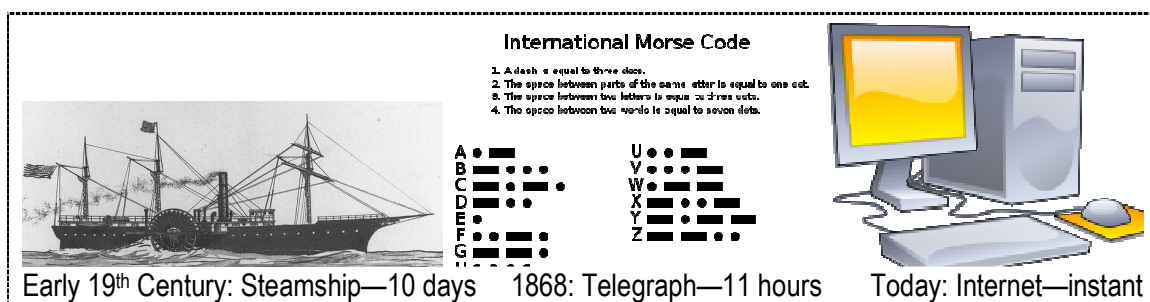
The generals had no way of knowing that the war had ended because of the slow speed of communication. First, the news had to come across the Atlantic Ocean by boat;

then word had to travel across land via messengers riding horses. Even after the later invention of the steamship, sending a message across the Atlantic took 10 days, and that time span would only carry the news shore to shore, not inland (“Learn about Submarine Cables”).

The invention of the telegraph liberated information from physical travel. In 1868, a message could be transmitted across the Atlantic at a rate of two words per minute using Morse code. The speed of information transfer between Europe and the United States went from days to minutes (“Learn about Submarine Cables”). The two words per minute rate represented an advance of epic proportions. Even so, that rate of transfer pales in comparison to today’s standards.

A specific example illustrates the technological advance. Using a steamship to deliver the Declaration of Independence from the United States to Europe would have taken 10 days. Using the transatlantic telegraph cable in 1868, the same act would have taken a little over 11 hours. With the Internet, the document can be sent and received by people anywhere in the world within seconds.

Figure 1.1—Transatlantic communication times for Declaration of Independence



While it existed in earlier forms, the Internet, as we know it, became accessible to ordinary users in 1993 (Severin 6). Since that time, Internet usage has grown rapidly, and new uses for the Internet have continually developed.

Understanding the Internet's impact on our world requires some background knowledge. This chapter briefly discusses the growth of the Internet and describes some of the ways that people use it. The chapter provides a foundation for understanding later chapters and presumes no prior knowledge on the part of the reader. The following topics are discussed:

- Search engines
- Social networking (focus on Facebook and Twitter)
- Online shopping
- Blogs
- News on the Web
- RSS feeds
- iTunes and Internet radio
- Streaming technology

The chapter also sets forward four basic principles describing the ways in which the Internet has effected change.

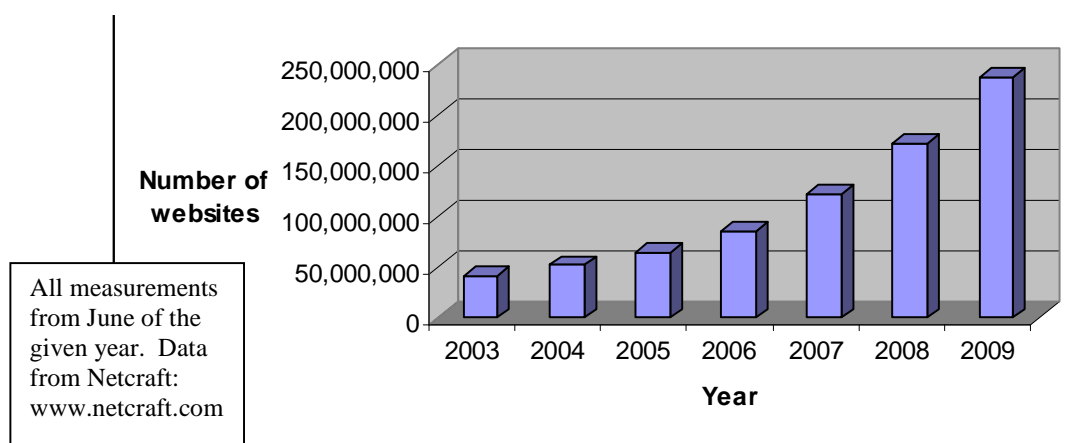
Growth of the World Wide Web

The first Web browser, Mosaic, became available in 1993. This program enabled users to navigate the World Wide Web by pointing and clicking, rather than by using a keyboard (Severin 6). Mosaic allowed users to view graphics easily, and documents could be navigated by clicking on links (“Realizing the Information Future” 30). That

first Web browser (succeeded by Netscape, then Internet Explorer, Firefox, Safari and others) made exploring the Web possible for everyday users. The number of Websites began to expand as well. In June of 1993, 130 Websites existed; by the end of that year, 623 existed. More sites meant more destinations for Web users, which led increasing numbers of people to use the Internet. By January of 1997, an estimated 650,000 Websites had been created (Gray). To put that in perspective, many high schools in the United States graduate classes larger than 130; 650,000 is greater than the 2008 population of North Dakota. In less than four years, the World Wide Web grew from the size of a moderately large high school to the size of a small state (“Annual Estimates...”).

The number of Websites continued to grow exponentially, as Figure 1.2 shows. In June 2009, the Netcraft company counted more than 238 million Websites—a number greater than the combined populations of Canada, Mexico, and Germany (“Country Comparison: Population”).

Figure 1.2—Number of Websites, 2003-2009



The number of people using the Internet also skyrocketed. In 1994, about 15 million people used the Internet, with most connections in the United States (“Realizing

the Information Future” 21). By 2008, there were approximately 1.6 billion Internet users—over five times the population of the United States, and about one of every four people on the planet (“Country Comparison: Internet...”).

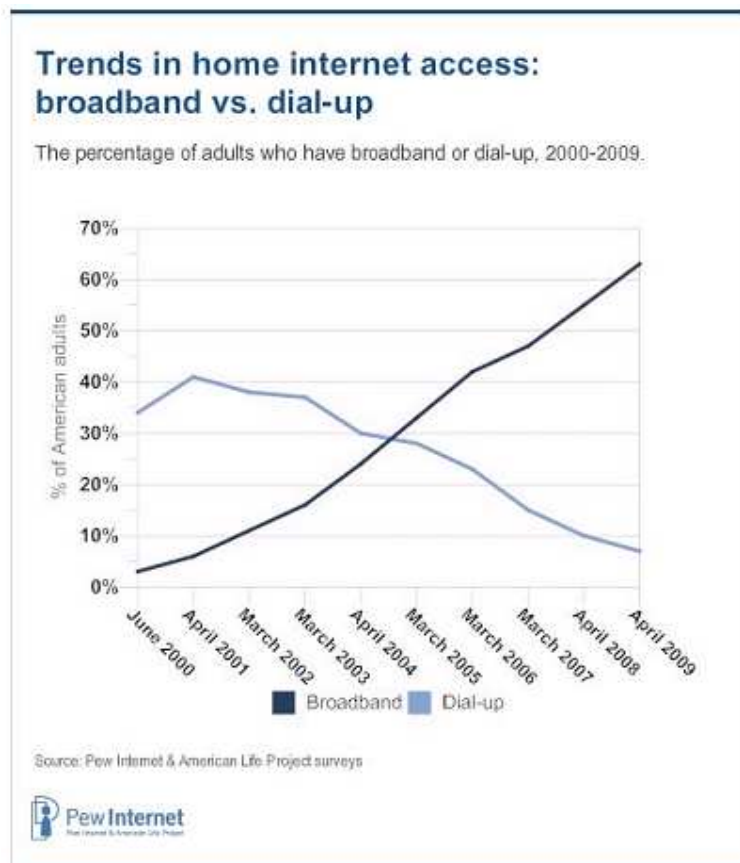
The speed at which people access the Internet has also grown. Originally, most home users accessed the Internet using dial-up service, connecting through phone lines. Now, an increasing number of individuals subscribe to services providing high speed broadband access. Figure 1.3 shows how broadband has overtaken dial-up access.

Between June 2000 and June 2004, the number of Americans with broadband at home increased from just six million to 51 million (Rainie 62). By April 2009, 63 percent of all American adults had broadband

access at home (“Home Broadband Adoption 2009” 3).

Internet users with broadband engage in more online activities, are more likely to create content online to share with others, and report greater levels of satisfaction with the role the Internet plays in their lives than those with slower access (Rainie 60).

Figure 1.3—Percentages of adults with broadband and dial-up Internet access



At first, Internet users were largely young, white men with high incomes and high levels of education. Now, Americans from every part of society access the Internet (Rainie 59). Many of the groups once unlikely to use the Internet at all now have high-speed access. In 2009, a report revealed that 30 percent of senior citizens and 35 percent of Americans with a household income of less than \$20,000 had home broadband access. Among Americans who graduated from high school but not college, 52 percent had broadband (“Home Broadband Adoption 2009” 3-4). Today, people throughout society use the Internet regularly.

In short, an ever-increasing number of people are accessing an ever-increasing number of Websites at ever-increasing speeds. With diverse people using the Internet, more Websites and tools have been developed to meet their needs, and higher speeds of data transmission have enabled more advanced uses. The popularity of Websites like Facebook, YouTube, and Pandora Radio demonstrate how the Web has grown.

Internet Access for the Homeless

Paul Weston, homeless and living in a shelter since he was laid off from his job as a hotel clerk, considers his Macintosh PowerBook a “lifeboat.” An aspiring computer programmer, he works on a program he hopes to eventually sell. Weston uses the Internet in stores with free access, searching for employment. He is not the only homeless individual who feels the importance of the net. While some homeless (although not many) have laptops of their own, many access the Internet using computers in shelters and other locations. Around a hundred of the shelters in New York City have computer access, and the executive director of San Francisco’s Central City Hospitality House estimates that half of the users at its computer drop-in center are homeless. Besides keeping in touch with others, the homeless can use the Internet to seek jobs

and housing, some of which can only be applied for online. Robert Livingston, a 49-year-old homeless man, cites another benefit of being online. "It's frightening to be homeless," he says. "When I'm on here, I'm equal to everybody else."

--adapted from "On the Street and On Facebook" by Phred Dvorak

The Wall Street Journal, 5/30/2009

Uses of the Internet

In a 2005 report, Pew researchers wrote, "The longer the Internet is around, the more people expect of it. Increasingly, it is seen as a utility rather than a novelty" (Rainie 62). The Internet has become a part of everyday life. Seventy-two percent of American adults access the Internet on a daily basis (Trend Data). For many Americans, online access may now be more important than telephone or cable television services. An economic recession in 2008-2009 led many individuals to trim their household budgets. In April 2009, 22 percent of adults reported reducing their level of cable television service in the previous year, and 19 percent of adults reported reducing cell phone service. In contrast, only seven percent of adults reported cutting back on their Internet service ("Home Broadband Adoption 2009" 4-5). These figures suggest that a growing number of American adults perceive Internet access as more essential than the other two services.

Trying to list and describe all the ways that people use the Internet would be kind of like trying to count all the feathers on an airborne flock of birds: there are too many things moving too quickly to see them all. That being said, Table 1.4 lists the percentages of American adults who reported using the Internet for some common

activities on the day before they took a survey. The table gives some indication of how many adults use the Internet for these purposes on a given day.

Figure 1.4—Prevalence of some online activities

Percentages of adults who reported engaging in activity “yesterday”

Send or read e-mail	57
Use a search engine to find information	50
Get news	38
Surf the Web for fun	38
Check the weather	33
Look for info on a hobby or interest	29
Look for news or information about politics or the upcoming campaigns	25
Do any type of research for a job	23
Look for information about a service or product the user is thinking of buying	20
Use a social networking site like MySpace, Facebook or LinkedIn.com	19
Do any banking	19
Research for school or training	16
Watch a video on a video-sharing site like YouTube or Google Video	16
Get sports scores and info	15

The full list of activities is available here:

<http://www.pewInternet.org/Static-Pages/Trend-Data/Online-Activities-Daily.aspx>

How many of these things have you and your classmates done?

source: “Trend Data: Daily Internet Activities,” Pew Internet and American Life Project Data collected 2005-2009. Accessed Sep. 2009.

Later chapters of this text refer to some of these activities and tools. Therefore, this chapter provides very basic descriptions of how Internet users go about a few of these activities and some of the tools they have used. By the time anyone reads this, new alternatives will be available on the Web, and the tools will have changed. But the fact that this information is outdated makes it more important, not less. For example, in six years, Twitter may have evolved so much that it bears no resemblance to its 2009 form,

or another service may have replaced it. Therefore, understanding how Iranian protesters used Twitter in 2009, and understanding how Twitter changed communication, requires understanding how Twitter worked in 2009—even if it has long since changed.

Search Engines

Search engines are programs that enable users to search for keywords in a collection of information. Users enter the words they would like to find, and the search engine examines the set of Webpages within its database. The engine then returns a list of documents relating to those keywords, most frequently ranking the documents according to their relevance to the searched terms. Search engines can be used to find information in a database or library catalogue, but are most commonly used to find pages on the World Wide Web (“Search engine”). Google (www.google.com), Yahoo! (www.yahoo.com) and Microsoft’s Bing (www.bing.com) are the most commonly used search engines on the Web, but more exist (“Top 20 Sites”).

Because of its speed and innovative approach to searching the Web, Google grew to dominate the search business. Other search engines had evaluated Websites’ relevance based on the number of times the search words appeared on the page: if a user searched for “border collies,” a Webpage that mentioned border collies 30 times would be ranked ahead of a Webpage that mentioned the breed 10 times. In contrast, Google’s search program determines relevance based on the number of other sites linked to the Webpage. Presumably, people create links to the Webpages they find most useful; Google thus determines a Webpage’s relevance based on its popularity. This method led to a high level of user satisfaction, and Google rapidly grew (“In Search of Google”). In July

2009, more than 72 percent of all searches in the United States went through Google (“Top 20 Sites”).

The many search engines on the Web can yield very different results to the same searches. (For an example, search for “border collies” on Google, Yahoo!, and Bing; for another example, try a search for “killer mutant zombies” on all three.) A 2007 study compared major search engines and found little overlap among their top links. The researchers compared the first page of results from four different search engines, including Yahoo! and Google. They found that more than four out of every five links could not be found among another search engine’s first page results (Spink). Because the search engines organize and rank links differently, search results can appear in a significantly different order on Ask and Yahoo!, for instance. Furthermore, search engines do not scan over the entire Internet—people may believe that Google searches everything, but even its database does not include every Webpage in existence (Notess).

Most of the time, just one search engine can provide the answer needed. But if the search yields little information, or if the user desires truly comprehensive results, switching to another search engine may be necessary (Notess). Alternatively, **meta search engines** such as Dogpile (www.dogpile.com) and Clusty (www.clusty.com) provide results from several search engines at once. Such sites have limitations, however. Meta search engines often exclude search results from some important sources—a user who tries the “killer mutant zombies” search on Clusty will notice that no results from Google appear. Furthermore, many meta search engines report only some of the results from each of its client engines, instead of the hundreds of results available directly from sites like Bing or Google. Valuable sites from later pages of results might

be excluded (“Why Use Metasearch Tools?”). Because of these limitations, the library staff of the University of California at Berkeley and some other experts advise users to stick to major search engines and skip metasearches (“Recommended Search Engines”).

One more cautionary note: Google and many other companies with search engines earn money through advertising. Often, search engines produce results labeled as **sponsored links**. These are links on a page of search engine results that lead to Websites that paid the search engine to list them. Users should be aware of this form of advertising and realize that the sponsored links are not necessarily directing them to the most relevant Webpages.

Figure 1.5—Google results with sponsored links

The screenshot shows a Google search for "digital camera" with 110,000,000 results. The search bar at the top indicates "Results 1 - 10 of about 110,000,000 for digital camera (0.14 seconds)".

The search results are divided into two columns. The left column contains organic search results, including:

- Digital Camera** (www.Dell.com) - Browse New Digital Cameras at Dell. Compare Brands and Megapixels Here!
- Digital Camera** (www.BestBuy.com) - 5%-22% Off Select Digital Cameras. Free 2GB Memory Card, Shipping
- Digital Camera** (www.Staples.com) - Large Brand Selection in Stock Now. Free Shipping on Most Orders \$50+
- Digital Camera Reviews and News: Digital Photography Review ...** (www.dpreview.com) - Jul 31, 2009 ... Digital Photography Review: All the latest digital camera reviews and digital imaging news. Lively discussion forums.
- Digital Camera Product Reviews: Digital Photography Review** (www.dpreview.com) - We are always interested in reviewing any equipment related to digital photography, be it cameras, lenses, flashes, add-ons or accessories. ...
- Canon Digital Cameras** (www.usa.canon.com) - Shoot with ease and style with the Canon PowerShot cameras including Digital ELPH series. PowerShot digital cameras incorporate the creative performance of ...

The right column contains sponsored links, which are highlighted with a red box in the image:

- Save \$20 Off \$100** (www.Newegg.com) - First-Time Newegg Customers Only! Use PayPal and Save \$20 Off \$100.
- Digital Camera** (www.RadioShack.com) - Shop Cameras, Camcorders, Power Batteries, Accessories and More.
- Digital Cameras On Sale** (www.Target.com) - Find great deals on Digital Cameras at your local Target.
- Digital Cameras \$9.95** (www.EcaMeraFilms.com) - Sale - Bargain - All Brands - Quantity Discounts - Free Ship.
- Digital Camera at Amazon** (www.amazon.com) - Save on Digital camera. Free Shipping Available. Buy Today!
- Digital Cameras - On Sale** - Find Great Deals on Digital Cameras. Select Orders Ship Free. Ship Now!

A callout box on the right side of the page, also highlighted with a red box, contains the text: "On Google, sponsored links may appear either in a shaded box as the first results or on the right side of the page." Arrows point from this callout box to the sponsored link sections in the search results.

For more information on using search engines effectively, see Chapter Two: Research, Credibility, and Wikipedia.

Got Some Time?

Do your own study of how search engine results overlap. Search for something, whether it's "Tim McGraw" or "good Bronx pizza." Compare the results from the search engines mentioned in this section. **If you've really got time...** share your findings with others.

News

While the majority of Americans still receive news from traditional news outlets—primarily television stations and newspapers—the number of people accessing news online continues to grow (“Key News Audiences...”)

People used the Internet to get news long before most of the country had logged online. A 1994 report on the future of the Internet referenced the existence of “‘newsgroups’...covering thousands of subjects of interest to its members,” including personal advice and travel tips (“Realizing the Information Future” 30). These newsgroups worked through e-mail address lists and enabled users to personalize their news, receiving information about a specific topic of interest. This personalization has continued to develop with the expansion of the World Wide Web, and it marks a significant development in the history of news. Americans have turned to Internet news for greater depth or more personalized news consumption, but as time passes, many also seek news on the Internet for its convenience (Rainie 59). (“Chapter Four: “Journalism,” discusses in detail how the Internet has caused news gathering and consumption to change.)

Most newspapers now have Websites that feature news, advertisements, editorials, and other material from the print edition of the paper; many of these Websites also contain content beyond that found in the printed copy. Most television news stations also have Websites with text and video content. CNN, CBS News, ABC News, The Los Angeles Times, the Associated Press, and many other news organizations draw huge numbers of visitors to their Websites daily. Smaller news organizations usually have Websites as well. Users who do a Web search for their local newspaper or television station will probably find, at minimum, that they will get the same news that print readers and television viewers do. Users might also discover that the Websites feature breaking news reports and updates long before newspapers are placed on front porches or before viewers turn to the nightly newscast: the Internet's capability for the instantaneous transmission of information has drastically accelerated the rate of news reporting. On the Internet, news outlets continuously report on events.

Figure 1.6—Steuben Courier homepage



Home page of the Steuben Courier of rural Steuben County, NY, circulation 10,655 ("The Courier").

Newspapers often make old content available online, storing news items or columns from past issues. Depending on the newspaper, users may access this content for a fee or free of charge. The Internet archive of *The New York Times*, for instance,

contains articles dating back to the paper's inception in 1851. Items from 1987 to the present are free, and the company charges users \$3.95 for articles written between 1922 and 1987. Because the paper's copyright on them has expired, earlier articles can be obtained free of charge ("New York Times Article Archive"). In other instances, users might be able to access old content via subscription databases (see "Chapter Two: Research, Credibility, and Wikipedia").

Figure 1.7—USA Today homepage

USA Today is a national paper with a circulation of over 1.8 million. ("USA Today::Audience").



Beyond traditional news outlets, Internet users looking for news can turn to **blogs** (short for "Weblogs"). Blogs are Webpages that individuals or groups regularly update. They can serve as personal diaries, but they have also become a powerful force in the news. Millions of people, both professional journalists and amateurs, use blogs to publish their thoughts on current events. Bloggers frequently provide links to news items on other sites, along with summaries and original commentary. The blogs on the Web, collectively referred to as "the **blogosphere**," have experienced astronomical growth both in number and influence. A few bloggers have won major journalistic prizes, and many traditional media outlets now employ several bloggers. Nonetheless, how the expansion

of the blogosphere might affect the future of journalism remains a disputed topic. (See “Chapter Four: Journalism”)

Bloggers can act as **news aggregators**, meaning that they collect (or “aggregate”) news to present to their readers, directing attention to items of interest. The politically conservative Matt Drudge, for example, was well-known for news aggregation long before the practice became common. He revolutionized online news by feeding his blog’s followers links to news stories and titling them with the sensational phrases common to tabloids. In addition to links connecting to traditional news sources, Drudge wrote “exclusive” news items usually based on gossip (Sappell). By 2006, approximately 10 million readers checked The Drudge Report daily (Cox). In more recent years, the politically liberal Huffington Post Website gained prominence as a news-aggregating blog, presenting links to news along with commentary and some original reporting. Blogs like these are not the only sites that aggregate news. Without human oversight, Google News collects stories from various sources automatically and sorts them into groups (Heald).

Besides accessing these and other news aggregators, Internet users can create their own page of automatically updated links using **RSS (Really Simple Syndication)**. RSS is a method of updating online content through “news feeds,” information streams to which readers can subscribe. If users subscribe to an RSS feed, the users are notified whenever new content is made available to them. This can save people time. Rather than going to several different Websites to check for updates, users can set up one Webpage with links to favorite Websites and blogs (“Let RSS Go Fetch”). For instance, after a regular reader of Peter King’s football columns subscribes to that writer’s feed, a link

appears on her customized Webpage each time Sportsillustrated.com posts a King column. Users can choose from among a wide variety of customizable news aggregators; popular Web-based ones include Bloglines (www.bloglines.com) and Google Reader (www.google.com/reader).

“Chapter Four: Journalism” discusses news aggregation, blogs, and online news consumption in greater detail.

If you're interested...

Take some time to explore RSS feeds. Commoncraft (www.commoncraft.com) created an excellent video demonstration about RSS feeds. A search for the video's title—“RSS in plain English”—should list the video among the results. Along with instructions from Google Reader, Bloglines, or another aggregator program, the video should be enough to get you started.

Shopping

The vast majority of consumer shopping still takes place in traditional stores. In the first quarter of 2009, online retail sales (e-commerce) accounted for 3.6 percent of all retail sales in the United States. That does not, however, make e-commerce small potatoes: that 3.6 percent of sales over three months translates to \$37.1 billion in sales—enough to pay the 2009 salary of every Major League Baseball player more than 13 times (U.S. Census Bureau; “USA Today Salaries Database”). Moreover, online sales continue to grow. From the start of 2000 to the first quarter of 2009, the percentage of retail sales transacted online has more than quadrupled (U.S. Census Bureau). Two of every three Americans with Internet access has purchased a product online (“Online Shopping” i).

Whether someone is looking for a wedding ring, a car, groceries, or a traditional Navajo headdress, the item can be purchased online. And even if they make the actual purchase in a traditional “brick and mortar” store, consumers can research the product or service online—and many do. Every day, approximately one of every five American adults look for information about something they are considering purchasing (“Trend Data”). Consumers can use the Web to compare prices, get technical information about products, or read reviews of products or businesses. Navigating to Amazon.com, the world’s largest online retailer, can demonstrate one way of doing online product research.

Amazon’s product listings include feedback from consumers. If a user searches for a product (a CD? a videogame? sunglasses?) and clicks on the resulting link to it, a rating of one to five stars will appear—the average score from all customers who have rated the product. Amazon also tells the user how many customers have written reviews of the product. Clicking the customer reviews link brings up a page similar to the one shown in figure 1.8, displaying the top review praising the product and the top review criticizing the product. These are the reviews that other shoppers voted as being most helpful (the best-reviewed reviews, in other words). While the star rating can indicate how much others like the product, the written reviews can explain why people have liked or disliked it. These testimonials often provide details a user could not get just by reading a product description. Do longtime fans of the musical artist like the new album as much as the older releases? Is the videogame too difficult for inexperienced gamers? Are the sunglasses too dark for driving? Not every review will be helpful, but finding the right review might make the difference between a purchase that leads to smiles and a purchase that leads to frustration.

Figure 1.8—Customer reviews on Amazon.com

Customer Reviews
Samsung Eternity a867 Phone, Black (AT&T)

91 Reviews

5 star:	(30)
4 star:	(35)
3 star:	(9)
2 star:	(6)
1 star:	(11)

Average Customer Review
 3.8 (91 customer reviews)

Search Customer Reviews

Only search this product's reviews

Create your own review

This product

Samsung Eternity a867 Phone, Black (AT&T) by Samsung
 Click for more info
 In Stock

The most helpful favorable review

109 of 112 people found the following review helpful:

★★★★★ **Very impressive and nice alternative to iPhone IMHO**
 Was looking to replace my current phone. Already have a work phone (BB) for email/texting. Was looking for a personal phone with good reception so I could close down my land line. Also wanted a phone with good form factor and ability to access the net w/good resolution viewing the pages. Initially tried an unlocked Nokia n78.....great reception (Nokia has the best), loved...
[Read the full review >](#)
 Published 8 months ago by Geekapoo

The most helpful critical review

71 of 73 people found the following review helpful:

★★★★☆ **Great as messaging device, but lacking as a phone**
 This is a really neat little device; the QWERTY keyboard is really good and it makes an excellent messaging device, but the lack of voice dial and speed dial "greatly" diminish the usefulness of this device as a phone. The old "phonebook index + #" trick is pretty useless since it only works with numbers stored on your SIM, and there's no way to know which number is at...
[Read the full review >](#)
 Published 6 months ago by Bob D

See more [3 star](#), [2 star](#), [1 star](#) reviews

Ad feedback

Customers who viewed this item also viewed

Amazon displays the favorable and unfavorable reviews that the most customers have found helpful.

The customer reviews page shows both the average rating and the breakdown of how many reviewers gave each star rating.

Websites use similar customer review systems across the Web, rating the sellers themselves in addition to products. An incredible number of businesses, both large corporations and neighborhood stores, engage in e-commerce; consumers need to know whom they can trust. On Amazon, shoppers can enter the Amazon marketplace to purchase new or used goods from a network of dealers. Someone looking for a used copy of *Harry Potter and the Prisoner of Azkaban* can click on the “used” link and start browsing through a list of hundreds of used copies for sale from sellers around the globe. The vast majority of these sellers have no affiliation with Amazon, so a shopper cannot trust these secondary sellers simply because Amazon lists them. A shopper can, however, see what percentage of buyers have given these sellers positive ratings (see Fig.

1.9); shoppers can even examine lists of comments from previous buyers to see what positive or negative remarks they left about the sellers. Sellers who anger their customers by improperly describing items, inadequately protecting items during shipping, or selling copies of *Harry Potter and the Prisoner of Azkaban* with missing pages will receive low ratings and lose business. In this way, the ratings and comments left by shoppers help to assure quality. The more people contribute to the ratings, the more reliable those ratings are likely to become.

Figure 1.9—Used books for sale in the Amazon marketplace

\$1.00 + \$3.99 shipping	Used - Very Good	Seller: [REDACTED] Rating: ★★★★★ 100% positive over the past 12 months (6 ratings.) 6 lifetime ratings. Shipping: In Stock. Ships from AL, United States. See Shipping Rates . See return policy . Comments: very slight cover wear and some spine creasing
\$1.00 + \$3.99 shipping	Used - Like New	Seller: [REDACTED] Rating: ★★★★★ 85% positive over the past 12 months (107 ratings.) 135 lifetime ratings. Shipping: In Stock. See Shipping Rates . See return policy . Comments: LIKE NEW

Which book would you purchase from the Amazon marketplace?

Shoppers can do research and make purchases using more Websites than a person's entire family can shake sticks at, and the Web makes comparisons easy. Within a few minutes, a shopper seeking a CD of Metallica's *Master of Puppets* album could check the prices at Wal-Mart, Target, Sears, Amazon, Barnes and Noble, CD Universe, Deep Discount, Best Buy, and Half, just to name a few.

Got Time?

Pick a product, whether it's a DVD, a cell phone, a book, a ruby ring, or a plastic flamingo. Find the product or versions of the product for sale on a few different Websites. Which item would you purchase, and from which seller?

Social Networking

Social networking sites help people connect with others, build online profiles, and share media like photos, videos, and music (Glaser). A host of Websites have features with social networking capabilities. If the Website enables users to link to other people in some way, then someone has probably placed it under the wide social networking umbrella. The most prominent social networking site is Facebook, which rapidly grew from 8.9 million registered users in 2006 to over 250 million users in 2009 (Glaser; Soller). Twitter and YouTube, while vastly different, also qualify as social networking sites.

Facebook users create their own profiles, listing as much or as little personal information as they wish, and can also post photographs and videos. Using privacy settings, the users control which people can view this information. They can make some information available to all Facebook members and other information available only to "friends," the people with whom they have established links through invitations. Friends can post public messages on one another's "walls," spaces dedicated to updates and messages; they can also send private messages or interact with others using some of the many applications available on Facebook, ranging from book lists to electronic Scrabble to Vampire Wars. Facebook members can find new friends by searching for people or

through common interest groups dedicated to nearly anything imaginable—for example, the author of this text is a Facebook fan of Sheetz gas stations and belongs to the group “When I was your age, Pluto was a planet.” Facebook also provides the capability to invite others to events, whether they are parties, political rallies, or something in between.

Figure 1.10—Facebook page of Lance Armstrong

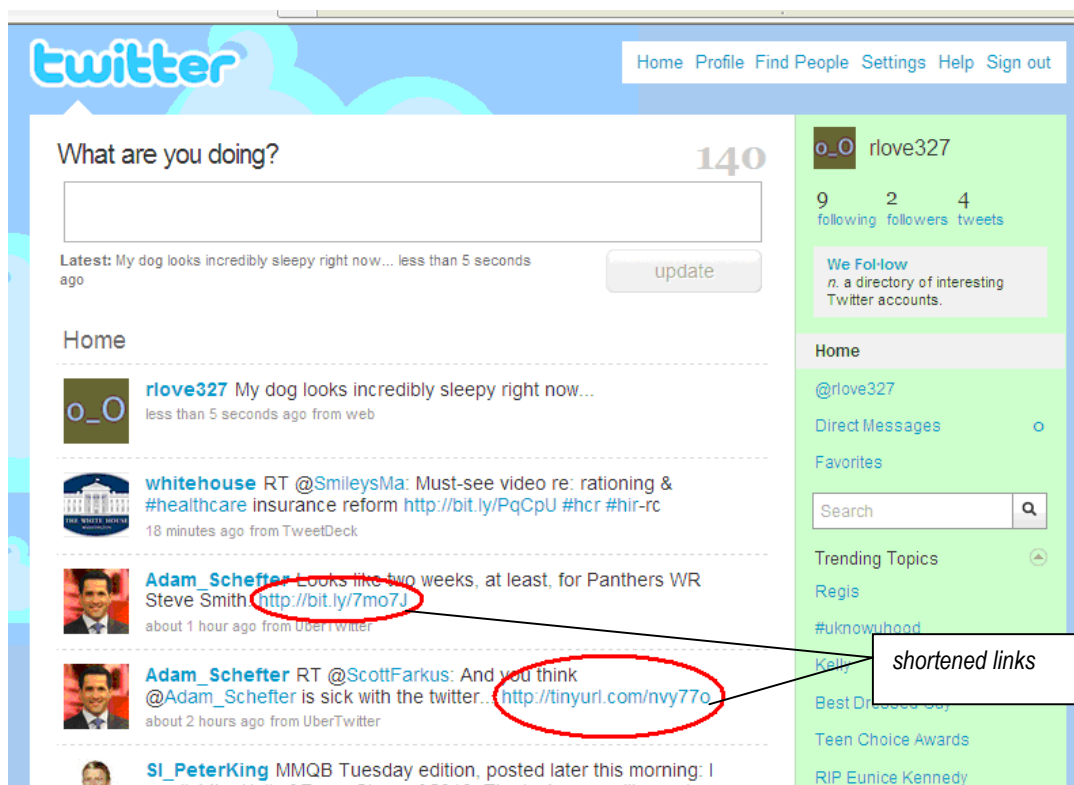
The screenshot shows the Facebook interface for Lance Armstrong's profile. At the top, there's a blue header with the Facebook logo and login fields. Below that, a green 'Sign Up' button is visible next to the text 'Lance Armstrong is on Facebook'. The profile picture shows Lance Armstrong in a black and yellow cycling jersey. The cover photo is a full-body shot of him riding a bicycle. The main content area shows a post from user 'maxarmstrong1' with a photo of a baby in a bicycle seat. The post text reads: '@maxarmstrong1 is a "peace"ful sleeper. on Twitpic Source: twitpic.com You should put that boy in a bicycle seat for the leadville. It should make it more fair since Wiens is like a decade older than you, and you are an old fart (same age as me.)'. Below the post, it says '2 hours ago' and 'Kováč, Becky, Noly and 2,059 others like this.' There are also navigation tabs for 'Wall', 'Info', 'Discussions', 'Events', 'Boxes', and 'Video'.

Cycling star Lance Armstrong uses Facebook to connect with fans, gain publicity, and promote causes such as his cancer foundation.

As users familiar with it can attest, Facebook includes more features than this chapter can describe. It can act as a way to keep in touch with friends, publicize opinions and causes, share photographs, organize events, advertise, play games, and much more.

Twitter, on the other hand, is much simpler. Its creators built the Website around the idea of the status update. Users create profiles, as on Facebook, and then post messages of 140 characters or less called “tweets.” This can be done not only from the Twitter Website, but through text messages from a mobile phone. People can post tweets to their profiles from anywhere that they can text. Twitter suggests that users tweet answers to the question, “What are you doing?” At its most basic, Twitter serves as a way for friends and family to keep track of one another, or for celebrities to communicate with fans. Users can elect to “follow” a person who is on Twitter, automatically receiving that person’s tweets on their own home page and (if the user chooses) via text messages to their own phone. Twitter enables users to stay constantly connected to one another, whether or not they can access the Internet at a given time.

Figure 1.11—Twitter homepage of rlove327



Of course, tweets can do much more than tell a user his Uncle Bill is flossing.

People can share links with one another (Web applications can shorten longer URLs so they fit within the 140 character limit, as seen in Figure 1.11). Reporters, newsmakers, organizations, and everyday people can spread news (or gossip) through Tweets. In Iran, people used Twitter to organize political protests. Twitter is as flexible as it is simple. In the words of blogger Lon Cohen, “The minimalist functionality of Twitter is probably [its] most powerful feature, enabling it to be many things to many people. The debates rage on whether Twitter should be for brands, for celebrities, or just for conversations with real people. The real secret is, it’s for anything you want.”

Both Twitter and Facebook can help users distribute social media like messages and photographs to people with whom they are networked. While YouTube can act as a social networking site, connecting people to others, it focuses on distributing social media (Lange, P.; Cohen). Users have uploaded millions of videos to YouTube. These videos can be messages to friends, colleagues, or potential customers; they can also be professional music videos, homemade comedy sketches, clips of digital cameras in blenders, or almost anything else. A number of politicians and their supporters have created politically-minded YouTube videos as campaign and debate tools (Spaeth 439). YouTube users can network by “friending” one another, as on Facebook, or by subscribing to one another’s “channels” so that they see newly uploaded videos. Users can communicate by typing comments in response to videos or by creating their own video responses. Alternatively, they can send private messages to other users.

They differ greatly, but Facebook, Twitter, YouTube, MySpace, and other social networking sites all help users to connect to other people. Numerous social networking

sites populate the Web, some of which target specific audiences. LinkedIn targets business professionals, for instance, and Dogster allows canine owners to create profiles for their pets. The number of social networking sites continues to grow, as does the number of people who use them.

Entertainment Media Online: Music, Movies, and Television

Especially with more individuals having access to broadband, people are increasingly using the Internet as a means to listen to music and to watch television and movies. All of these media forms have been accessible on the Internet for a number of years, but at first, they were mostly available illegally; these copies of media files violated copyright laws. Copyright laws guarantee that the creators and their companies receive payment for their work. Consumers have some legal rights to create copies of music, movies, television, and other media for their own use, but in many cases, providing copies of these items for others denies artists and companies the monetary compensation to which they are legally entitled. The music recording industry, in particular, has fought against such copyright violations, commonly referred to as piracy. The percentage of people who downloaded music illegally continued to be greater than the percentage of people who paid for downloads until 2008. The digital music marketplace was worth \$2.7 billion dollars in that year (Bainwol).

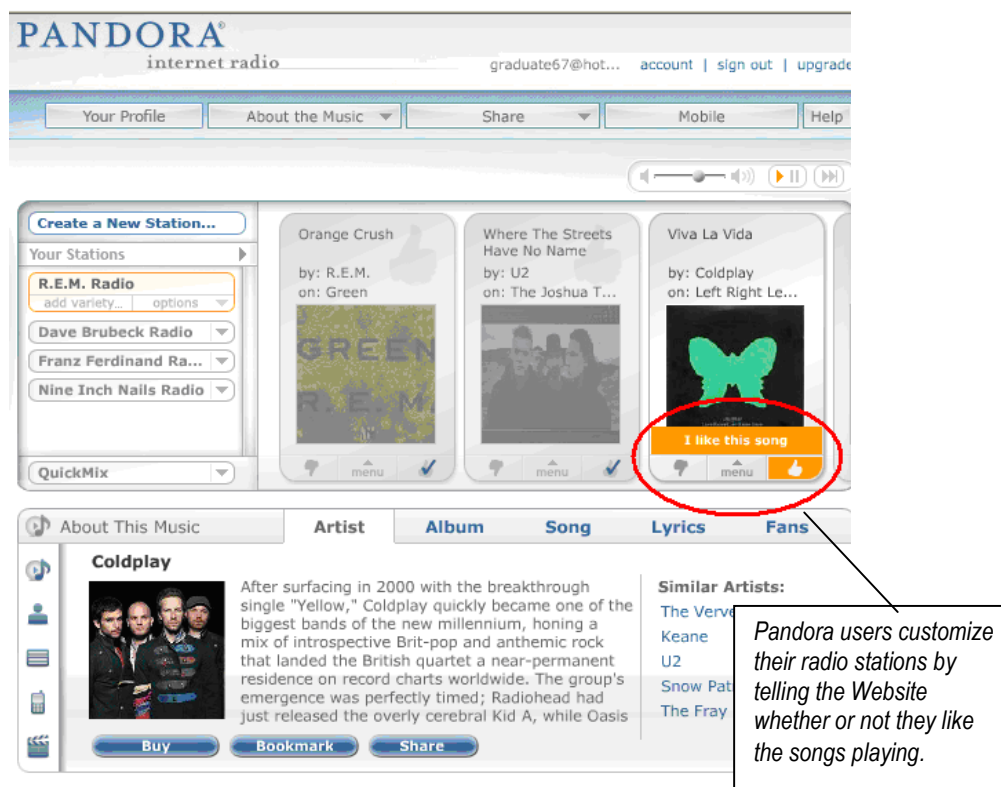
Apple's iTunes store, developed to sell music and other media to iPod users, continues to dominate digital music sales (Hansell). Users access the store through the iTunes application (available for free download at www.itunes.com). The store sells music both as single tracks and as whole albums, and movies and television episodes can be purchased as well. As on Amazon, users provide star ratings of products on a 1-5

scale and write reviews, which are then ranked according to their helpfulness as determined by other users. In addition to music, movies, and television, the iTunes store contains a number of **podcasts**, recordings distributed online, often using an RSS feed (U.S. Food and Drug Administration). Users of iTunes can download single episodes of podcast series such as the *BBC History Magazine* or *Sesame Street*, or they can subscribe to the feed and have each new episode automatically downloaded. These podcasts can consist entirely of audio or include video, and many of them can be downloaded for free. Once downloaded, podcasts can be viewed or listened to through the iTunes application on a computer or by using an iPod or other personal digital music or video player (“iTunes”).

iTunes may be the most widely used online music service, but a number of others exist with varying features. In addition to albums recorded on CDs, Amazon sells digital music files singly and as parts of albums. Napster and Rhapsody give users this option as well, but focus more on selling users subscriptions. For a flat monthly rate, subscribers can create playlists from a library of several million songs and listen to the selected music using **streaming** technology, perhaps best-known from YouTube. Streaming technology lets media files begin to play as soon as the user has downloaded enough data for them to begin. Streaming represents an alternative to downloading and saving audio or video files; instead, the user listens in real time while the remainder of the file continues to transfer (“Streaming Media Explained”). The streaming services of Napster and Rhapsody give users a vast variety of music options, but unlike purchased music files, users can only access these services if they continue to pay the subscription fee.

Streaming technology has also made the rise of Internet radio possible. More Americans use Pandora Radio (www.pandora.com) than any other Internet radio site (Singley). Pandora offers customized “radio stations” by using what it calls the Music Genome Project. A group of music experts analyzed millions of songs and noted the traits of each. The Coldplay song “Clocks,” for example, features traits including “basic rock song structures,” “a subtle use of vocal harmony,” and “acoustic rhythm piano.” Pandora’s database contains a number of other songs with similar characteristics, and it finds music for users with this data. Users enter the name of a song, composer, or musical artist, and Pandora creates a station comprised of that and similar songs. The listener then provides feedback, as shown in figure 1.12. If the listener gives a song a thumbs up, Pandora finds more songs like it; a thumbs down will cause Pandora to skip the disliked song and avoid it in the future. Listeners always have the option of skipping ahead to another selection. Pandora also makes it easy to access artist information, song and album information, and lyrics. As an additional feature, listeners can find others who like the same songs they do.

Figure 1.12—Pandora radio station



Last.fm offers a similar Internet radio Website, but it has a greater focus on social networking and uses **crowdsourcing** (Singly). In crowdsourcing, the public at large produces something, rather than an individual or a selected group (Alserver). Crowdsourcing follows the theory that several hundred heads are better than one. Amazon.com uses this practice to create its product ratings and reviews; Last.fm uses crowdsourcing to create stations for listeners. Unlike at Pandora, no specified group of individuals categorized the music (Singly). Instead, Last.fm analyzes its users' listening preferences to find patterns. If 3,000 users who enjoy Toby Keith's music also like Tim McGraw's music, Last.fm reasons that it can safely recommend Toby Keith to Tim McGraw fans, or vice versa. By drawing on its users for information in this

crowdsourcing process, Last.fm determines the songs it plays on listeners' personalized stations. The Website uses the public to do the work.

Elsewhere on the worldwide Web, users can access video through streaming technology. The television networks ABC, NBC, CBS, and Fox and others make some episodes of television series available online. YouTube and Hulu (www.hulu.com) contain some television episodes and some full length films, and subscription services offer further options. While a greater number of selections are available on DVDs sent through the mail, Netflix (www.netflix.com) and Blockbuster (www.blockbuster.com) subscribers can watch several thousand films online at any time using streaming.

The Internet also makes it possible for people to distribute entertainment media to a large audience without having any connection to a major production company. In 2008, Joss Whedon (creator of *Buffy the Vampire Slayer*) used the Web to release a 43-minute musical in three parts. A traditional studio would probably not have backed the project, but the musical, titled *Dr. Horrible's Sing-Along Blog*, reached No. 1 on the iTunes chart of top-downloaded videos. *Time* magazine dubbed the Internet musical one of the best inventions of 2008 ("The Direct-to-Web...")

Four Principles of the Internet

While the Internet has influenced the world in more ways than any human can count, studying these influences can lead to an understanding of patterns. The majority of the innovations brought by the net came about because of four interrelated characteristics:

1. The Internet accelerates the speed with which information can be accessed and transferred.

2. The Internet connects people and organizations.
3. The Internet enables anyone to publish content.
4. The Internet drives businesses to adopt new models for making money.

These four principles provide a framework for this text. The ideas are simple and overlap with one another, but they lie at the heart of a vast number of the changes the world has undergone.

Principle #1: The Internet accelerates the speed with which information can be accessed and transferred.

The uses of the Internet briefly discussed in this chapter illustrate what the increased speed of communication has made possible. For example, using a search engine, a person can surf through millions of Websites to find needed information incredibly quickly. Twitter rapidly communicates a message from a cell phone to the Website and to another cell phone. The rapid pace of online communication has made it possible to get fresh news not just once or twice a day through a paper or a broadcast, but 24 hours per day and from any source in the world that the person desires. While reading that news update, a person could go to Pandora or Last.fm to access a song by their favorite musical artist, and could do so in less than the time it would take to walk to a shelf of CDs and load the disk into a stereo. The Internet makes information sharing fast.

The Internet is not the first technology to provide instant transfer of information—the telephone, the radio, and the television all enabled people to listen to voices or watch events in real time. But the Internet significantly broadened this capability through the second principle.

Principle #2: The Internet connects people and organizations.

The social applications of this principle are clear: people can keep in touch with family and friends using resources like e-mail and social networking sites. But the Internet can also bring people together who would never meet otherwise. Individuals with a common interest—a sports team, a political cause, genre of music, etc.—can network with one another using the Internet. The Internet makes it easy to communicate with millions of others across the globe, not just the people in a person's neighborhood or town. Like ordinary individuals, businesses and other organizations also use the Internet to find new contacts.

Because of the direct connections that the Internet makes possible, more communication can be done without the aid of a middleman. Many celebrities use social networking sites to communicate with fans themselves, without a reporter relaying their messages. Political action groups and individual politicians use the Web to get their messages out. Instead of depending on traditional media to spread word of their causes through the news or paid advertisements, they can create their own Websites or post content on Twitter, Facebook, YouTube, blogs, and other sites, confident that their message will be accessed by a large number of users. Musical artists and video producers can release their material to the public themselves, as Joss Whedon did with *Dr. Horrible's Sing-Along Blog*, rather than depending on a company to distribute the material for them. The Internet gives people and organizations a direct link to the homes of millions of people. As Internet access grows, the number of possible connections with people will increase, potentially making the Internet even more powerful. The more

people come in contact with one another through the Internet, the greater the potential for messages to be passed on.

Principle #3: The Internet enables anyone to publish content.

The Internet has fundamentally changed communication because of how many people use it. In the past, a limited number of people had access to the means of publishing information. Very few people could own a printing press, a radio station, or a television station. People could purchase the use of these resources by buying advertisements or renting them, but the great expenses involved kept the majority of people from using these media to communicate information. A television network could provide a live broadcast of the Olympics, but common people could not afford the equipment required to do their own live broadcast. Corporations or political campaigns could afford to purchase radio advertisements, but an everyday person could not. Newspapers sold small advertisements in the classified section to individuals, and writers could submit letters to the editor that might get published. But few people had the money to order a printer to create hundreds of copies of a book they had written. Technology had made it possible to reach a large audience, and to do so quickly, but only a small percentage of the population could spread messages of their own using that technology. In contrast, the Internet made mass communication possible for almost everyone. People can create Websites, write blogs, or post photos or videos easily and with little money.

In the news business, for instance, the spreading of the news was formerly left to professional journalists, and everyday people consumed the news through television, radio, and newspapers. These consumers could make their individual views known to others only in relatively limited ways, by word-of-mouth or letters to editors. The

Internet allows people to easily offer their own commentary and become producers of news, not just consumers. People can also offer original news reporting through the Internet, acting as “citizen journalists.”

Crowdsourcing by Amazon, iTunes, Last.fm, and other Websites has harnessed the Internet’s ability for widespread publication and aided these sites in offering content for their users. On the sites named above, people submit reviews, and the sites then present the reviews for other users. In the past, most people would praise or condemn products just for the people they knew personally; only professional critics with print space in a publication or air time could give their views to a mass audience. In the Internet age, everyone can be a critic.

With traditional media such as television, a few people produced content (the shows) and many people consumed the content (by viewing the show). The Internet has changed that model by allowing a huge number of people to create content and reach a mass audience. This empowerment of the public can have both positive and negative consequences, as later chapters discuss, but one cannot deny the revolutionary effect of the Internet on mass communication.

Principle #4: The Internet drives businesses to adopt new models for making money.

The revolution in communication means that many businesses must adapt their models to use the Internet effectively. All successful businesses must have a solid business model; without a sound plan, the business will not succeed. If Jimmy and Sally set up a lemonade stand near the end of an unpaved, dead-end road and charge \$20 for each cup of lemonade, they are unlikely to have many sales (unless their parents feel exceptionally generous). But if they get permission from a family friend to set up a

lemonade stand at a downtown yard sale, charging 50 cents per cup, they might do very well. Under most circumstances, more customers and a lower price lead to more sales. The Internet can help businesses both to expand customer bases and to reduce costs. If Jim and Sal's Beverage Enterprises can purchase its lemonade mix more cheaply from a supplier in Venezuela, then market its product at a reduced price to tens-of-thousands of potential customers using the worldwide Web, then the business could grow significantly.

The cost of shipping a glass of lemonade from Birmingham to Minneapolis might put a damper on Jimmy and Sally's visions of wealth, but the basic point remains the same. The Internet can connect businesses to one another, as when the lemonade stand purchased supplies from a Venezuelan company. It can also connect businesses to more consumers, making a wider market for goods and services available. The lemonade stand might be slightly too small (or a lot too small) to take advantage of such opportunities, but it is not just multinational corporations that have been reaping the benefits of the Internet. A vast array of sellers have established their own Websites or become part of a network of sellers like the Amazon marketplace. With such relative ease, a "mom and pop" store can become part of the global marketplace.

But what brings fortune to some will wreck the fortunes of others, and the Internet is no exception. Some businesses have adapted their business models to the Internet more successfully than others. The struggles of the newspaper and music industries have received particularly widespread media coverage. The number of newspaper subscriptions has fallen, in part, because news outlets have made their reporting available for free online. This decrease, in turn, has led to a decrease in ad revenue for newspapers. Online ad revenue could offset these losses, but for most newspapers, their

online operations have not brought in enough money to make up for the reduced revenue from the print edition. As a whole, the industry has struggled to adapt to the digital age. The music industry has also experienced a difficult transition. Illegal downloading of music continues to hurt the recording industry's profits. Legal online music services have become popular, but the number of CD sales continues to decline, and record labels have seen a downward trend in their revenue.

The Internet did bring new business opportunities to the news and music industries, but it also disrupted the old business models that had made them successful. The prospect of recovering to their former levels of profitability remains doubtful.

Key Terms

blog—a Webpage that an individual or a group regularly updates.

blogosphere—a term referring collectively to all of the Web's blogs.

crowdsourcing—the practice of having the public at large produce something, rather than an individual or selected group

meta search engines—search engines that provide results from several other search engines at once.

news aggregators—people or Websites that collect news to present to readers, drawing attention to items of interest.

podcasts—recordings distributed online, often using an RSS feed.

RSS—Really Simple Syndication—a method of updating online content through “news feeds,” which are information streams to which readers can subscribe.

sponsored links—links on a page of search engine results that lead to Websites that have paid the search engine to list them.

streaming—technology allowing media files to play as soon as the user has downloaded enough data for them to begin, rather than having to wait for the entire file to be downloaded.

Review

1. In what year did the first browser make the World Wide Web available to everyday people?
2. What percentage of American adults have broadband Internet access?
3. To what category of Websites do the Drudge Report and the Huffington Post belong?
4. Describe an example of crowdsourcing.
5. Explain the basic functions of Twitter.
6. Explain the difference between how Pandora selects songs for users and how Last.fm selects songs for users.
7. What are the four principles of the Internet?
8. A man who goes shopping at a store becomes angry when a salesperson deliberately gives him false information. Upon returning home, the man writes a blog entry describing his experiences at the store. An hour later, a reader from another state adds a comment describing her own, similar experience. Not long after, yet another reader thanks the blogger and commenter for helping him to avoid being fooled.

Which principles of the Internet are evidenced in this example, and where?

Discussion

1. Think back to a time when you had notably slower Internet access, if there was such a time. Also, imagine that your Internet connection was significantly faster than it is now. How did, or how might, slower and faster speeds affect the way you use the Internet?
2. Which search engine do you most often use? Why do you use it more than other search engines?
3. What examples of crowdsourcing can you think of, beyond those mentioned in the chapter?
4. For what purposes would Facebook be more suitable than Twitter? When would the opposite be true?
5. Which businesses from your local area might benefit the most from establishing a Website for consumers? Which businesses are more likely to lose business to online competition?

CHAPTER TWO: RESEARCH, CREDIBILITY, AND WIKIPEDIA

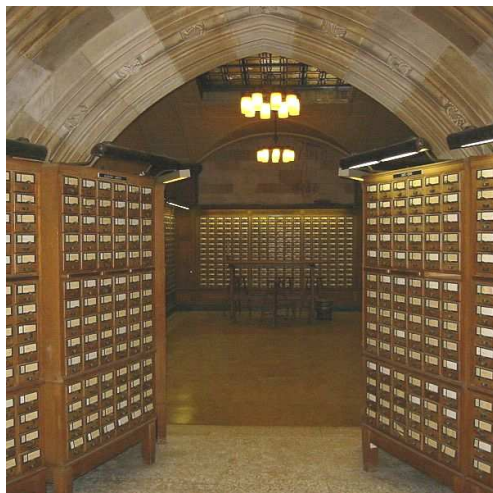
Before you start reading...

Think about how you get information. Consider these questions:

- When you need to find information, where do you turn for an answer: to someone you know, to a library, to the Internet, or elsewhere?
- When using the Internet to look for information, where do you start your search?
- When doing research on the Internet, how successful have you been? What difficulties have you experienced?
- Have you used Wikipedia? How useful do you consider it?
- What have others, including peers and teachers, told you about doing research with the Internet?

How it used to be...

Figure 2.1—Card catalog at Yale University



Before the Internet, research had to be done in places that held copies of information, particularly libraries. For decades, visitors wanting to find specific books in a library would use a card catalog, a series of drawers containing alphabetized notecards. The notecards listed books by title, author, and subject. Eventually, some libraries began to

feature electronic indexes of their holdings. The first such databases were inferior to card catalogues. Among other shortcomings, users could look up books using only authors and titles, not subjects. Improved versions of electronic catalogues began appearing in the mid-1980s (Hildreth).

In addition to shelves and shelves of books, many libraries also contained magazines and newspapers. Libraries tended to subscribe to many magazines and keep back issues for a specified length of time. Depending on the library, older issues of magazines might have been available, often bound together into hardcover books. Storage issues prevented most libraries from maintaining a collection of too many periodical titles. Old newspapers were usually collected on microfiche or microfilm—sheets or reels of film containing hundreds of miniature photographs of pages. Researchers wanting to read old newspaper articles would select the appropriate film, then look through a viewer that

magnified the images, visually scanning through the pages to find the desired date or article.

The need to have physical access to materials limited the research capabilities of most people. University libraries maintained large collections of varied materials, but smaller communities with no nearby college had less access to resources. Most libraries participated in interlibrary loan programs, in which a person could request a book from a distant library that would be sent to a closer one. Receiving resources through the mail in this way could help but did not totally level the playing field. For one matter, the process could take weeks. For another, just knowing of a book's existence could prove difficult, since card catalogs and electronic databases only listed the resources that a particular library owned (Hildreth). Researchers searching for related books had to depend on word of mouth, printed catalogs and advertisements, or bibliographies printed in the books they already had.

For quick reference, people could turn to encyclopedias, which contain alphabetically listed articles on general topics. Printed, multi-volume sets of encyclopedias were extremely expensive, though starting in the late 1980s, cheaper versions intended for computers began appearing on compact disc. For people with basic questions about a topic, an encyclopedia was the easiest research option. Whether that person had an encyclopedia at home or had to travel to a library depended largely on the individual's household income.

Today, printed encyclopedias are obsolete because the World Wide Web has made information so readily accessible. Anyone with Internet access can use a search engine to find information within seconds. Internet users can also rapidly search for books and see whether they are available from nearby libraries. Magazines and newspapers are frequently available online, either on their own Websites or through electronic databases containing thousands of publications. All of these resources can be used from the comfort of home.

The Internet's speed and connectivity have revolutionized research. Research once meant sitting in a library with a stack of books; today, researchers in coffee shops can call up tens of thousands of sources with a few keystrokes. Search programs can scan these sources in ways unimaginable to earlier generations. People affiliated with universities still have greater access to resources, but the Internet has given everyday people the capability to use many research materials that were too expensive and too physically distant in the past.

The explosion of the Web brought a similar explosion in the number and kinds of research materials; it also opened many of those materials to the masses. But doing research on the Internet also brings challenges. Those without the necessary skills or knowledge might find Internet research bewildering.

This chapter examines how the Internet has affected the availability of information, as well as the practices used to access that information. The chapter also provides guidance about good Internet research habits, including effective searching and the evaluation of source credibility. Finally, the chapter pays special attention to the

development of Wikipedia, describing its strengths and weaknesses and offering recommendations for how to best use it.

Knowledge in Transition: Encyclopedias and the End of Print

The Web democratized information by making it quickly and cheaply available to everyday people. The history of the Encyclopaedia Britannica reveals just how radical this change was.

Especially after its 29-volume 1911 edition, the Encyclopaedia Britannica developed a powerful reputation for its reliability; it was generally known as “the world’s most comprehensive and authoritative encyclopedia” (Greenstein 2). The company depended on a force of door-to-door salesman to market its product to consumers, especially middle-income parents desiring to boost their children’s academic performance (Greenstein 3-4). Lower-income families simply could not afford Britannica. In 1995, purchasing a 32-volume set of the Encyclopaedia Britannica cost \$1,500 (Feder). At such prices, many people could afford to use the encyclopedia or its competitors only by going to a library.

In the 1980s, the move from print to a digital version on compact disc began to bring down prices for encyclopedias, although expensive print versions remained dominant. Grolier, one of Britannica’s competitors, released a compact disc version of its encyclopedia that cost \$400, significantly less than the \$700 price tag for Grolier’s printed product. Still, relatively few parents purchased the encyclopedia because of the high cost of the hardware required (Berger). CD-ROM drives—the predecessor of the DVD drives now found on computers—cost \$600-\$1,200 throughout most of the 1980s (Lewis). Furthermore, computers were not as widespread as they would become in later

years. In 1985, Encyclopaedia Britannica Inc. rejected Microsoft's offer to produce a CD version of its product in part because only four or five percent of households had home computers (Greenstein 4). The company remained focused on its lucrative print product, and in 1990, Britannica had its most profitable year ever (Greenstein 9). The tide, however, was turning.

Microsoft's Encarta Encyclopedia changed the market by offering an affordable, multi-media encyclopedia. Having had its offer to Britannica (and others) turned down, Microsoft struck a deal with Funk & Wagnall's Encyclopedia in 1989. Microsoft termed the new product Encarta to avoid association with the poorly regarded Funk & Wagnall's name. Released in 1993, the Encarta Encyclopedia emphasized multi-media presentation, including pictures, video, and voices. Encarta also included the ability to perform searches and featured articles connected through **hyperlinks**—words, phrases, or images that users can click to jump to another document or to another section within the document (Greenstein 7; "Hyperlink"). These features wowed reviewers, and future editions expanded these capabilities. Unlike most earlier electronic encyclopedias, Encarta made full use of its medium by doing more than offering text. Also unlike earlier electronic encyclopedias, Encarta was cheap. Microsoft gave it free to customers who purchased computers; for a person not purchasing a computer, Encarta cost about \$100. The cheaper price and multimedia features made Encarta attractive to consumers—much more attractive than the Encyclopedia Britannica. Britannica began offering a CD version as a free add-on to its print edition in 1994, with the cost for the electronic version alone still \$1,200. The price dropped to \$995 a year later, and then to \$200 in 1996, but it was too late—Encarta now dominated the encyclopedia market (Greenstein

7-9). By late 1995, reporters were describing Encyclopedia Britannica Inc. as “troubled,” and a deal was reached to sell the unprofitable company to investors (Feder). The day of the print encyclopedia was over. Computerized encyclopedias could offer value and features that books could not.

BLAST FROM THE PAST

In 1993, Stephen C. Miller wrote an article in *The New York Times* describing the wonder with which 8th graders explored an early multimedia encyclopedia. The students browsed from topic to topic using hyperlinks: a search for dolphins led to a video and an article mentioning sonar, which led to the topic of submarines, which led to the battle of the Merrimack and the Monitor during the Civil War, which led to articles on the war and slavery, and finally to civil rights and Martin Luther King, Jr. The rapidity with which these links work is old news to 8th graders today, but to kids used to switching between half a dozen heavy encyclopedia volumes, the simplicity of a hyperlink was amazing.

Miller ended his article with a caution that remains highly relevant today:

This type of feature underscores the need for students to be well grounded in basic research techniques taught by a teacher or librarian. Without an understanding of how to parse an idea so that they can pursue its most relevant aspects, students could turn a pursuit of knowledge into a ramble through trivia.

The full article, titled “Encyclopedias Go Multimedia,” appeared on April 4, 1993 and is available at *The New York Times* Website.

Before long, the encyclopedia business would change again, with the Internet pushing aside encyclopedias on CD-ROM. Just two years after the release of Encarta’s

first edition, Microsoft introduced a hybrid version that enabled users to update the encyclopedia monthly through Internet downloads (Greenstein 10). Britannica, too, turned to the Web, making its content available by subscription, first to institutions like universities and libraries, then to individual consumers in 1995 (Greenstein 10). The company made its online articles free in 1999, but reverted to a subscription model in 2001 (“Are there free...?”). With traditional encyclopedias requiring payment for their online resources, Wikipedia became a dominant force [*see “Wikipedia” section of this chapter*]. The increase in free information online, at Wikipedia and elsewhere, undercut the pay encyclopedias. In 2009, Microsoft ended the Encarta venture. The company’s announcement explained that “the category of traditional encyclopedias and reference material has changed. People today seek and consume information in considerably different ways than in years past” (Gralla). People no longer had to turn to the old encyclopedias to answer questions: the Internet had the information they needed, and for free.

Over the past 25 years, computers and the Internet have greatly expanded the availability of information. Encyclopedias, traditionally recognized as repositories of information, demonstrate this trend. In decades past, people who could not afford to pay hundreds of dollars for their own set of encyclopedias would have to travel to a library to get information. Beginning with Encarta, encyclopedias became much more affordable, making thousands of articles available to less affluent families. Finally, the expansion of the Internet meant that anyone with access to the Web could find information for free.

This change means a great deal to families. Before the Internet, children with questions could find answers quickly if their parents could afford a \$700 or \$1,500 set of

books; otherwise, the child would have to wait to go to school to find the information—assuming the school could afford up-to-date encyclopedias. Today, the vast majority of children can find an answer within seconds by turning to the Web at home, at school, or in a public library. Rapid access to information, once a privilege of the affluent, now belongs to nearly all.

Reshaping Research: What the Printing Press Tells Us of the Future¹

The implications of the Internet for research extend far beyond the availability of general reference works. Because of its capabilities, the Internet has changed and will continue to change the fundamentals of research. The current era's switch to electronic information ranks as the most profound shift since the printing press moved the world from a scribe-based culture to a book-based culture. In the words of Michael Hauben:

Just as the printing press...replaced the hand-copying of books in the Renaissance, people using computer networks [today] are essentially creating a new method of production and distribution of creative and intellectual written works...

Before Gutenberg developed his printing press around 1450, scribes had to create new copies of books by hand. Communication could take place between one person (the writer) and one other person (the individual receiving the new book). The printing press changed the communication model from one-to-one to one-to-many. After Gutenberg's press spread throughout Europe, the ideas of one person could be transmitted to many

¹ This segment of the chapter draws heavily upon the work of James A. DeWar, a researcher for the RAND Corporation, and Michael Hauben, an author who studied technology and communication at Columbia University. Both DeWar and Hauben based their research on a seminal text on the printing press by Elizabeth Eisenstein, *The Printing Press as an Agent of Change*; DeWar also refers to scholarly reviews of Eisenstein's text. Readers interested in the relation between the printing press and the Internet should consult DeWar's and Hauben's texts, both of which are freely available online.

others with relative ease. Hundreds or thousands of copies of a text could exist, instead of just dozens. This one-to-many model—publisher to consumers—persisted until the Internet boom. Suddenly, almost anyone could contribute to a work that almost anyone could then view. The collective knowledge of the world could be shared and commented upon rapidly by millions across the globe, and the many-to-many communication model was born (DeWar). Just as the printing press had before it, the Internet expanded communicative possibilities in a revolutionary way.

The Other Inventor

Gutenberg is credited with inventing movable type in Europe, but elsewhere, movable type was invented approximately 400 years earlier. A Chinese man named Bi Sheng invented movable type in the middle of the 11th century. The invention's use did not spread far, however, because unlike its Western counterparts, the Chinese alphabet contains thousands of characters (Eberhart).

These powerful changes in communication forever altered humanity's quest for

Figure 2.2—Illustration of Gutenberg examining a proof from his printing press



knowledge. The printing press and the Internet are alike in that their spread established innovative research environments. The printing press changed the way information was “collected, stored, retrieved, criticized, discovered,

and promoted”; the Internet is doing the same (DeWar). Because the printing press and the Internet have altered research in parallel ways, a review of the past can prove instructive for the present. Examining how the printing press affected the flow and accumulation of information can help to clarify the effects that the Internet is having and will continue to have on research.

Leaping Forward: The Transition from Scribal Culture

The idea of progress, of standing on the shoulders of those whose work came earlier, is basic to modern thought. But during the centuries when scholars could only copy information by hand, researchers could not always attempt to advance from past research. Frequently, they had to work hard just to recover what had been learned and then lost or corrupted (DeWar). Because reproducing texts required so much time and effort, few books existed. Relying on one person to handwrite copies also led to errors. Simply put, scribes made mistakes. And since a scribe most often worked from a single copy of a manuscript, he had no way to see if he was duplicating an error made by an earlier scribe. Mistakes thus multiplied and lived on, sometimes leading to substantially different versions of the same text. Even the most useful of manuscripts would not go long before becoming corrupted at the hands of a copyist. Of course, works that no one copied might suffer even worse fates. With so few copies available, damage from moisture, vermin or normal wear and tear could result in a significant loss of knowledge (Hauben). Even a bit of forgetfulness within the intellectual community could cause valuable data to become lost (DeWar). All in all, reliance on the primitive scribal communication system put information in a precarious situation.

The widespread use of the printing press made knowledge much more secure. In significantly less time, texts could be reproduced by the hundreds, and they were. In the fifty years after Gutenberg's development of his printing press, as many book copies were printed as scribes had made in the previous 1000 years (DeWar). These copies, unlike those scribes had produced, were standard, with no errors introduced during the production process. A greater number of accurate copies meant more security. If only six handwritten manuscripts of a text exist, the loss or destruction of all six is distinctly possible; if six hundred copies exist, the disappearance of the text becomes highly unlikely. As Thomas Jefferson wrote, print "secured precious documents not by putting them under lock and key but by removing them from chests and duplicating them for all to see" (Hauben). The printing press introduced "typographical fixity"—the power of print to preserve information in the same form over time (DeWar). Typographical fixity made gains in knowledge more lasting. During the scribal era, scholars revered the ancient Greeks and Romans because they had held knowledge not tainted through centuries of copying. A "rebirth" of interest in such classical learning took place periodically throughout the medieval period, such as during the 9th century reign of Charlemagne and his immediate successors. These rebirths, however, did not last. Problems like war and famine arose and drew attention, causing scholarship to fall by the wayside. But the printing press made it possible to "fix" learning in book format, enabling the preservation of knowledge. Consequently, the Italian Renaissance did not die out like earlier revivals of scholarship. Instead, typographical fixity allowed it to spread throughout Europe (DeWar). The printing press prevented knowledge both from being forgotten and from becoming corrupted through copying errors.

Importantly, the printing press was not a magical charm that caused all previous problems of inaccuracy to disappear instantly. Mistakes persisted for quite some time:

...roughly during the first century after Gutenberg's invention, print did as much to perpetuate blatant errors as it did to spread enlightened truth. Putting scribal products into print resulted in a cultural explosion. Never had scholars found so many words, images, and diagrams at their fingertips. And never before had things been so confusing with, for instance, Dante's world view achieving prominent visibility at the same time that Copernican views were making their way into print. Nonsense and truth seemed to move hand in hand with neither made uncomfortable by the presence of the other. (Rosaldo 509)

Centuries of confusion could not be put aright in an instant. Scholars had a great deal of sorting-out to do. Armed with printed books, though, such unraveling became a more manageable task. Researchers had more sources available to them than ever before, and cross-referencing works became a great deal easier. Formerly, the labor-intensive task of creating an index of a text's contents fell to a manuscript's owner, who might or might not have done a thorough job. (Those who study medieval texts are familiar with indexes containing thorough lists of topics beginning with "A" and "B," but faltering later in the alphabet.) Book printers, in contrast, began to publish indexes regularly because they served as a selling point for customers (DeWar). With a larger number of texts containing more complete indexes, scholars could begin to resolve questions and emend

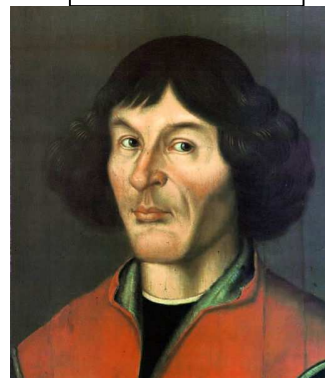
errors that had persisted for centuries. Later editions of texts featured additions and corrections, and knowledge progressed. Over time, the typographical fixity of the printing press enabled the more accurate and updated information to triumph.

Scholars could now move beyond efforts to recapture the knowledge of the ancients, instead contributing new information and ideas of their own. People originally intended to cleanse contradictions from their fields through the study of original texts, but they ended up going much further. Martin Luther, for instance, began studying documents to purify Christianity by returning to an earlier era. Ultimately, he revolutionized religion by initiating the Protestant Reformation (Rosaldo 509).

Copernicus, similarly, compared the ideas and data of the ancient astronomers Ptolemy, Aristotle, and others. After noting their errors and inconsistencies, he published his

landmark book proclaiming that the Earth revolved around the sun (DeWar). Luther's and Copernicus's projects began with the same belief that had marked previous research: scholars should reach to the past to regain the untainted wisdom of the ancients. But once printed books became more numerous, knowledge could proceed further. With dozens or hundreds of people now able to examine the exact same texts, readers undertook coordinated efforts to improve knowledge by rooting out errors and inconsistencies and by adding new information. The scholarly impulse had changed "from recovery to discovery" (Rosaldo 510). Especially in science, a worldview informed by decaying knowledge was superseded by a belief in progress (Rosaldo 510). People began to believe that they could continuously improve human understanding.

**Figure 2.3—
Copernicus**



They accordingly pushed human inquiry further, fostering a willingness to challenge the ancients and consider new ideas. This mindset fueled both the Protestant Reformation and the Scientific Revolution (DeWar). The printing press made both these revolutions possible not only by making research faster, more accurate, and more coordinated, but by reversing an attitude that had prevailed for centuries. Scholars began to feel that degradation was not inevitable; knowledge could grow consistently.

The printing press changed how people thought about research because it overcame the shortcomings of scribal culture. Gutenberg's technology set down learning in printed books, enabling its preservation and growth and permitting wider discussion. These improvements, in turn, led to an overhaul of cultural attitudes toward scholarship. By taking the advancements from the printing press further, the Internet, too, has the potential to recast the quest for knowledge.

Printing Press and Internet Parallels

Our culture already works with an eye toward progress, so the Internet will not shift attitudes in the precise manner that the printing press did. The Internet might alter the basic assumptions underlying research in other ways, but no one will be able to recognize such large-scale change for many years. More immediate changes can already be observed, however. Because of the Internet, current methods of doing research and communicating knowledge differ from past practices. Advancements from the spread of the Internet mirror the advancements that resulted from the spread of the printing press. Drawing parallels between the effects of the printing press and the Internet can illuminate the present and future of research.

Both the printing press and the Internet accelerated the speed with which updates and corrections could be made. As printing spread, publishers realized the value of using input from readers to improve their books. With several copies of a first edition produced quickly, many people could inspect the text and then offer their corrections, criticisms, and updates by writing letters. The second edition could incorporate this information, the third would be refined still further, and so on. The 16th century text titled *Theatrum Orbis Terrarum*, which detailed world geography, demonstrated this process. The publisher, Abraham Ortelius, invited the criticism and suggestions of others, and cartographers from far and wide sent in the latest maps of regions not covered in the text. By the time of Ortelius's death in 1598, at least 25 separate editions had been published (Hauben). Under the scribal system, the manuscript of the *Theatrum* might have been viewed by only a few dozen people, one at a time. Scholars might have made corrections and additions in the margins of their own manuscripts, but all of these versions would likely have remained separate; a central, updated version might never have been created (DeWar). Under the print system, an updated edition was created and distributed not just once, but more than two dozen times, with each new edition representing an improvement in the understanding of geography. The issuing of multiple editions represented a giant leap forward for humankind, though the process still has limits. New print editions can incorporate corrections and reactions to ideas, but are rarely published more than once per year (and generally every 3-12 years for reference works). Parts of the first edition then become obsolete, a fact that cannot be easily marked upon the old book (DeWar).

The Internet can solve these problems and push the speed of updating and corrections even further. Thousands or millions of people across the globe can view material posted on the Web, then correspond with the creator through e-mail. The dialogue between publisher and readers can take place within days, or even hours. The documents can then be updated within minutes, and the additions or corrections become viewable to everyone at the same time, regardless of location. Under the scribal system, corrections and updates could fairly be said to be made at the pace of a lame mule that may or may not arrive at its destination. If changes can be made at the pace of a locomotive in print, digital changes can be made at the speed of a supersonic jet.

Such alterations could be made more quickly in part because the Internet, like the printing press, encourages collaboration through meetings. As a side effect, the establishment of printing shops in major cities across Europe gave scholars and authors a place to gather. Traveling scholars would meet up in these locations, and these meetings of minds quickened the development of ideas and knowledge (Hauben). The printing shops served as meeting places, message centers, and cultural hubs for scholars typically dispersed throughout Europe (Hauben). The Internet, similarly, draws together scholars today. Researchers can easily network with one another through Websites, e-mail, videoconferencing, and a host of other tools. Printing shops provided a meeting place, and hundreds of years later, the Internet eliminated the need for a physical meeting place.

In a related development, both technologies helped knowledge-seekers to overcome the obstacle of physical distance. During the heyday of the scribe, scholars desiring to consult a variety of texts had to travel to procure them. Travel required significant time and money, so the vast majority of people could not possibly engage in

scholarly pursuits, even if they had the inclination. Texts were out of reach for the common person (Hauben). By exponentially increasing the number of books, the printing press greatly reduced the need for travel. Scholars could acquire more books with relative ease, and those working near cities would be able to find a wider variety of texts in the area than before. Geography nonetheless remained an impediment for the next several centuries. A person living near Rice University in Houston, for instance, would have access to more research material than a person living in a small town in the Texas panhandle. The Internet has not completely eliminated this imbalance, but it has reduced it. With a wealth of scholarly journals and magazines accessible online, a person could perform serious academic research without having to leave her desk chair. As more and more printed material is converted to digital format, the problem of physical location will become still less relevant to researchers. Already, a person sitting at a home computer can access sources of a scope unthinkable in earlier decades.

Differences within the text made research easier as well, both with the printing press and digital documents. Scholars could consult the work of others much more easily than in previous years. Compared to their counterparts during the scribal era, scholars with the advantage of print not only had access to a far larger number of books, they also had the advantages of title pages, tables of contents, footnotes, and more comprehensive indexes (Rosaldo 510). These and other innovations were born from the minds of printers seeking to make their volumes as useful (and marketable) as possible to readers (DeWar). Print thus made it easier to find a piece of information within a text and to cross-reference other texts. Computerized documents accelerate cross-referencing even

further. Hyperlinks connect readers to other sources instantly. Researcher James A.

DeWar described the potential benefits of hyperlinks in 1998:

This capability opens the book into a new dimension with immediate accessibility to definitions of words, alternative means (say, more visually-oriented) of understanding a concept, active discussions of a given topic, further research on the subject, alternative interpretations, etc. The dissemination of knowledge is importantly changed by the immediacy of this new referencing capability.

Electronic documents can provide links to a huge variety and quantity of other material that can enhance the researcher's understanding. Viewed in historical context, the breadth of this linked material is just as incredible as the speed with which it can be accessed. Large electronic documents can also be found and scanned using full-text search. Rather than flipping through pages, a researcher can enter a few keystrokes within a search program and find the desired information. A writer who wishes to incorporate a half-remembered quotation from the novel *Little Women* does not need to spend time getting a copy of the book and visually scanning its pages; a quick Google search would pull up the exact passage within seconds (DeWar). The printing press made information easier to access, and digital publication has taken this simplicity to a new level. Computers and the Internet allow for extremely rapid cross-referencing.

The Internet and the Index

Internet users have created myriad indexes that can aid a researcher in finding basic information, no matter how serious or silly the inquiry is. The Astronomy

Department of the University of Wisconsin has posted a list of every named star. The Internet Movie Database (IMDB) is another, extensive example. The Website has a listing for every movie that has been released, and some that are still in the planning stages. Looking at the page for *Avatar*, for instance, will give a user a plot summary, a list of awards the film has won, and the complete cast and crew list. The site is fully hyperlinked, so if a user wants to know if the best boy grip from *Avatar* (John Sudtell) worked on any other set, the user can find the answer (he has—for 22 episodes of *Seventh Heaven*). Wikipedia also contains a number of lists, sometimes appended to articles. After the entry on cow-tipping, for instance, users have submitted a list of pop culture references to the mythical prank.

While very few people will ever have a need to know more about depictions of cow-tipping on television, the many indexes on the Internet can have serious applications. Before the Internet, specialized books were required to find information that is now freely available and easily accessed through search engines and hyperlinks. In other cases, the information might have been impossible to find. Before IMDB existed, a person might wonder why an actress looked familiar, but would have had no way of researching the other films in which she had appeared. Now, a few keystrokes can resolve the matter.

Because the printing press both increased the availability of resources and made them easier to use, it changed the way people learned, and the Internet could have similar implications for education. During the scribal period, those people who received an education learned primarily through listening. With manuscripts so scarce, people often had to learn by listening to someone else either read aloud or lecture. Education followed an apprentice system, whereby a pupil would depend on a master to teach everything he

could. Education also depended on memorization because students could not count on having access to the materials later (DeWar). The abundance of books radically changed this system. As printing press researcher Elizabeth Eisenstein explained,

Possibly no social revolution in European history is as fundamental as that which saw book learning (previously assigned to old men and monks) gradually become the focus of daily life during childhood, adolescence and early manhood.... As a consumer of printed materials geared to a sequence of learning stages, the growing child was subjected to a different developmental process than was the medieval apprentice, ploughboy, novice or page. (DeWar)

People began to learn through reading, not just by listening to a mentor. This change unlocked greater educational opportunities than had existed before. Apprentices and students could use books to learn more than their teachers could offer on their own (Hauben). Individuals like astronomer Tycho Brahe and physicist Isaac Newton learned primarily through independent reading, not through attachment to other scholars. In the age of the Internet, the potential for self-education has become even greater. By connecting to the worldwide computer network, people can access a far-ranging array of knowledge, continually updated (DeWar). A learner can also interact with other people electronically, opening a pool of knowledge and expertise greater than a single teacher can hold (Hauben). Furthermore, the Internet provides for real-time access to information. The proliferation of books made memorization less essential because readers could, in some instances, look up information later. The Internet reduces the

need for memorization far more drastically, as a person with mobile access can retrieve a fact or formula within seconds. The World-Wide Web enables “just-in-time” learning, giving individuals the capability to find information at the exact moments they need it. Rather than acting as “readers” accumulating printed knowledge, people can act as “users” of digital information (DeWar). With effective Web search skills, people literally have the knowledge of the world at their fingertips.

Lest it be forgotten...

Not all information is available online. Printed books contain detailed studies and explorations of subjects, and only a tiny percentage of printed books have been posted on the Web. In many cases, researchers would be served best by procuring a printed text.

In one sense, none of the capabilities enumerated so far are especially new.

Books were already widely available; feedback was commonly incorporated into future editions; multiple sources of information could be consulted when doing research; the library system allowed people to acquire distant sources; and people could educate themselves. To a lesser degree, some of those things were true even in the scribal culture. Nonetheless, the printing press and the Internet generated revolutions in learning. As James A. DeWar explained,

What makes the two communications breakthroughs important are the quantum increases in the ease and speed with which knowledge could be promulgated; feedback could be received and incorporated; one could find up-to-

date knowledge and one could be put in touch with a wide range of materials on the topic.

Neither the printing press nor the Internet invented research, but by increasing the speed and accessibility of it, they did unlock a host of invigorating capabilities.

Comparing the printing press to the tools of today can shed some light on what is here and what is to come. Still, the future is not clear. While the pace of change has accelerated since the 15th century, wide-scale transformations do not take place overnight. The Internet is still a young technology. No one could perceive the full effects of the printing press for more than a century, and not all changes were predictable. Unintended consequences abounded after the creation of the printing press. For example, the Catholic Church made extensive use of printing, but the effects of that use—Luther’s questioning of texts and the Protestant Reformation—lay beyond its control (DeWar). The Internet, too, might alter society in ways no one has yet considered.

Speaking of Research Capabilities...

As part of the writing process, the author of this text corresponded with a professor at the University of Nebraska-Lincoln. That professor suggested that the author consult histories of the printing press as a way of examining the changes brought about by the Internet. After multiple e-mails about the topic, the author began using Google to search for “social history of the printing press.” This led to a few pages that mentioned Elizabeth Eisenstein’s 1979 textbook *The Printing Press as an Agent of Change*. The author then consulted Amazon and Wikipedia to uncover more details about Eisenstein’s work. He learned that Eisenstein’s book completely changed historians’ view of the printing press and is widely considered the single most important book on the subject.

Since the book was out of print and too costly to purchase, the author went to the University of Nebraska-Lincoln Website to investigate interlibrary loan. He also searched Google again, this time for “eisenstein printing press as an agent of change.” This search led to James A. DeWar’s paper comparing the printing press to the Internet—exactly the information that the author of this text needed. In his footnotes, DeWar included a hyperlink to Michael Hauben’s similar paper, available on the Website of Columbia University. DeWar’s footnotes also referenced Renato Rosaldo’s review of Eisenstein’s book, published in the July 1981 issue of the journal *Comparative Studies in History and Society*. Interested in Rosaldo’s thoughts, the author navigated to the library page of the University of Nebraska-Lincoln Website, used a search application to find that the journal’s back issues were available within the JSTOR database, and downloaded Rosaldo’s review in its entirety.

All of this research was done from the comfort of the author’s living room—in a rural area of western New York.

Pitfalls of Electronic Research

As the preceding section makes clear, the Internet is the most stunning research tool to be developed in centuries. That is not to say, however, that it does not bring problems and challenges with it. Middle school students and university professors alike need to exercise care when using the Internet to find information.

For casual users scouring the Web for answers, the huge amount of available information might actually impede search efforts. Surrounded by such a wealth of interconnected pages, one can easily become tangled in the Web. One law professor likened online searches to “a plunge down the rabbit hole,” a la *Alice in Wonderland*,

because users tend to leap from hyperlink to hyperlink with such rapidity (Tuhus-Dubrow). Such navigation can sometimes be exhilarating, but users who are not practiced Web searchers may find themselves jumping from tangent to tangent, losing their original focus. For people who have difficulty selecting what information is most relevant, Web surfing can become a time-consuming wild goose chase (Miller). The incredible variety of online sources offers great opportunity but can become overwhelming. Having billions of sources is a double-edged sword. A smaller number of sources would contain more limited information, but would also be easier to sort through. The Web, on the other hand, is undeniably complex.

Furthermore, not all information can be trusted equally. While always true, this caution especially applies to the Web. A list of search results might contain expertly researched and credible sites, but the Websites of uninformed, biased, or misleading people might populate the same list. False and misleading information has always existed, but it could not be published as easily in the

past. Historically, professional knowledge workers—such as editors, reviewers, publishers, news reporters, and librarians—maintained the credibility of information (Rieh 1). These people acted as gatekeepers, determining what ideas and information could be communicated through print. Publishing for a mass audience cost a great deal,

and everyday individuals could not afford printing presses, let alone the large amount of ink and paper required. Consequently, those people who were involved in the production,

The Credibility Problem

“As people gain access to a wider variety of information resources, they face greater uncertainty regarding who and what can be believed and, indeed, who or what is responsible for the information they encounter.”

--Soo Young Rieh and David R. Danielson

review, or sharing of printed material exercised significant control over what could be published. These gatekeepers prevented much incorrect and misleading material from appearing on a printed page. Today, however, the Internet gives nearly everyone the capability to spread information without having an expert inspect it beforehand.

Applications make it easy for people to communicate information on their own Websites or blogs—whether or not they actually have useful knowledge to share. Valuable information and worthless bunk exist side-by-side on the Web, and a user must know how to separate the two.

On the other hand...

The Internet gives everyday people the freedom to share their ideas with a large audience. In the past, only selected individuals had the opportunity to express their thoughts to a large number of people. Those who controlled the publishing machinery and process could determine which ideas the public would hear. Freedom of expression was therefore limited in its reach.

The Internet gives almost all people the chance to express their views and communicate information. Not everyone agrees on the importance or correctness of these views and information, but the power of publishing is much more widespread. Observers have thus noted that the Internet has “democratic potential,” giving a voice to those who otherwise could not be heard (Bird 294).

Web users unsure of how to evaluate the credibility of sources sometimes trust in sites better left unvisited. Evaluation of Webpages can prove difficult for everyday people. Expert researchers have in-depth knowledge of their fields, know about the major scholars relating to the subject, and regularly communicate with other scholars.

These individuals are equipped to evaluate information on its own merits when they do research (Rieh 10). Content knowledge and experience enable these experts to sort through sources. But students and others who do not possess such knowledge of an area must still judge information if they are to use the Web. Users evaluate source credibility using many criteria—and not all of them are truly valid indications of a source's trustworthiness. A 2001 study of 25 high school students, for instance, found some teens to consider as credible all sites returned by a search engine (Lorenzen 161). This assumption is incorrect: results from Google, Bing, Yahoo, or other search engines are likely to include a number of unrelated or unreliable sources. Likewise, the "relevancy" ranking from a search engine does not mean that the site's information is trustworthy. A high rank on a results page is in no way a guarantee of quality (Harris 163). Once users do choose a Webpage, a host of other factors might falsely lead them to trust information that is not credible. The color scheme or design of a Website can have significant influence in the search process. Users make judgments about credibility based on appearances, even if they do not consciously recognize this factor as part of their thinking (Steffes 21). Studies have revealed that many users select Webpages using their personal preferences for color schemes and designs. Users tend to spend time with Websites that they consider attractive and professional-looking, even though the appearance actually has no bearing on the quality of the source's information (Agosto 316). As one researcher put it, "Bad information can be made to look quite nice" (Lorenzen 161). A study of high school students also found that they equated quantity with quality: the students wrongly assumed that if a page contained lots of information, the information presented was accurate (Agosto 327). With millions and millions of Webpages available,

knowledge-seekers must find ways to sort through them and select the best sites. But too many people make such choices without carefully evaluating the information that the source presents. (*For advice on evaluating information, see the next section of this chapter.*)

Relevancy Does Not Equal Quality

A user who performs a Google search for “Martin Luther King” will likely find www.martinlutherking.org among the top results. The site’s formal title is “Martin Luther King, Jr.: A True Historical Examination.” The Website has a professional appearance and cites published sources.

But far from being a credible source, this Website is racist and anti-Semitic. The information on the page is devoted to inspiring hatred of Jews and blacks, especially Martin Luther King. Even a brief examination of the site’s content reveals how prejudice underlies every part of it.

So why is the Website given such a high relevancy ranking from Google? The search engine ranks Webpages based partly on how many other Websites link to them. In this case, many school librarians use the site as an example when teaching students to evaluate the credibility of Web sources. A number of librarians have linked the racist site to their own pages as an example of an untrustworthy source (Harris 163). Google’s formulas, of course, cannot account for the fact that people have linked to the Website to speak out against it, and so the racist site receives prominent display in the results list.

Experienced scholars may be able to select sites with accurate information, but using the Internet may have limited their work in other ways. Some researchers have charged that the Internet has actually narrowed the range of sources consulted. Such an idea might seem strange given the multiplicity of materials that the Internet has made available, but the fact that information is available does not mean it will be found. Indeed, the massive amount of data accessible through the Internet might actually obscure information, just as a pile of hay can make finding a needle difficult. As previously noted, with a vast array of information available, Internet users must somehow filter that information (Tuhus-Dubrow). Even the most dedicated researchers cannot possibly read each of the millions of Webpages and thousands of scholarly articles related to their field. Instead, they must use some system to pick which sources to review. As a side effect, these selection methods may limit the variety of sources that scholars consult. A study by James A. Evans, released in 2008, found that even as more scholarly journals became available online, researchers were citing fewer unique articles from them. Scholars all seemed to be citing the same material in the papers they wrote. They also seemed to be relying more exclusively on new articles. The Evans study found that rather than consulting a broad and diverse base of sources, scholars in the digital age seemed to flock toward the same material when searching for information (Evans 395).

According to Evans, the use of search applications might partially account for the shift toward newer sources and for the repeated use of popular articles (399). When articles appeared only in print, researchers were more likely to browse through whole issues of journals. Unable to jump directly to a relevant article with a hyperlink, researchers would have to flip through pages of a journal's back issues. While time-

consuming and sometimes frustrating, this old style of research could have advantages.

Browsing through print issues of journals can provide valuable context and background information; moreover, researchers might happen upon an article that proved useful in a surprising way.

For a comparison, imagine shopping for shoes in a mall. A shopper might be going toward a department store to purchase an advertised pair of shoes, but he sees other stores as he walks by. Interested, the shopper might enter one of these stores and buy a book he had never seen before. Furthermore, the shopper could see several other stores and items in the course of his walk. This would increase the shopper's knowledge of what products are available, enabling the shopper to make a more informed choice about what to spend his money on. Perhaps the shopper sees other shoes with colors that he likes better, or that have a new design. Or perhaps the shopper decides to wait until later to buy the shoes, opting to buy a new hat instead. Browsing can have unintended results. Driving directly to the department store would have taken less time, and the shopper would have gotten the shoes he saw in the ad. But he would not have gotten to see what other items were for sale, and he never would have seen the book he chose to purchase. The shopper would have missed the variety of the mall.

In electronic databases of journal articles, highly targeted searches eliminate the need for browsing. Instead of flipping through pages, seeing what other articles scholars had written and perhaps stumbling upon something they want to read, researchers simply type a search term into a box. Search applications take researchers to articles more directly than print browsing. This reduces the likelihood of happening onto a less-directly related article that is still interesting. And since search applications tend to rank

newer and more popular articles more highly, their use might limit the range of sources that a scholar finds (Tuhus-Dubrow). Recent papers and papers that several other researchers have chosen often appear at the top of a results list—the digital equivalent of placing an item in the front of the store with a neon sign over it. Newer and more popular articles are thus more readily and more commonly accessed. Electronic searching is fast compared to print browsing, but it might also cause researchers to overlook older, less widely-known sources that could prove beneficial.

The Evans study also suggested that scholars, besides relying on search applications, select articles based on how many of their colleagues have referenced the article. As a result, the most-referenced articles quickly rise to the top of the heap, and other articles become buried in pages of results. Attention leads to more attention for an article. While this effect has always existed, the Internet has intensified it. Online databases can quickly show a user how many times other researchers have cited the article, as shown in figure 2.4. If a number of other articles within the database refer to a particular source, then scholars are more likely to review that source for themselves. If very few other researchers have cited the article, scholars are less likely to consult it (Evans 399). As Evans explains, “When people become more aware of each other’s choices, they factor those choices into their own activities” (Tuhus-Dubrow). Often-cited articles are read more, while rarely-cited articles are more widely ignored.

Figure 2.4—Citations within an EBSCO database



1. [Argentina versus England at the France '98 World Cup: narratives of nation and the mythologizing of the popular](#)
P.; Tomlinson, A.; Young, C. Media, Culture, Society; 2001 Vol. 23 Issue 5, 20p. Document Type: article; (AN
MCS.BC.EDG.ALABARCES.AVEFWC) [Citation Record]
Database: EBSCO Publishing Citations
Add to folder Times Cited in this Database: (5)
WebBridge

2. Imagined communities: Reflections on the origin and spread of
Type: book; (AN ICROSN.ANDERSON.VERSO.AIIA) [Citation Record]
Database: EBSCO Publishing Citations
Add to folder Times Cited in this Database: (167)
WebBridge

Databases like EBSCO can tell a user how many other articles cite a particular source.

These filtering processes have broad consequences for research. Because scholars can so easily see what information others have used, they might reach consensus about the importance of articles more quickly. As Evans explained, “By enabling scientists to quickly reach and converge with prevailing opinion, electronic journals hasten scientific consensus” (399). This agreement means that important articles are likely to be highlighted within the scholarly community. On the downside, however, some work may be given unmerited attention. Researchers might turn to some articles just because they are widely read, not because they discuss important ideas and data. In the words of anthropology professor Alex Bentley, the tendency to use the same sources “makes academic research into a popularity contest.” The way in which scholars “latch onto ideas,” he predicts, will become “more fashion-based” (Tuhus-Dubrow). For less-popular articles, the narrowing of sources would have the reverse consequence. Articles not immediately perceived as having great significance more quickly fall by the wayside (Evans 399). In some cases, time might reveal that these “lesser” articles actually hold much value, but the articles may be forgotten before they can have their impact. For this

reason, if the Internet has limited the range of articles that academics use, future research could be handicapped.

However, not all scholars agree that the Internet's narrowing of sources hurt research—or that the narrowing effect even exists. Researcher Carol Tenopir disagreed with Evans' findings, writing that her own work has found that the Internet has *broadened*, not limited, the range of articles that scholars read. Evans studied citations within scholarly articles, examining which ones received repeated reference in other research. Tenopir, on the other hand, studied what articles scholars were reading. She found that academics did far more extensive reading in 2005 than in 1977, before journals were available electronically. In 1977, the average university scientist read approximately 150 articles from about 13 different journals. In 2005, with most journals available online, the average university scientist read more than 280 articles from approximately 33 different journals. These findings suggest that the Internet has encouraged scholars to read from more sources than in the past, even if they do not directly refer to those sources in the articles they publish. The distinction is important. As Tenopir explained, "Reading is not citing. Faculty read for teaching and for current awareness, all in addition to their reading for the research that leads to citing. For every one article cited, they read many more." Therefore, a narrowing among cited sources does not necessarily mean that scholars are *reading* from a more limited selection of sources.

Furthermore, some observers believe that Evans' findings about narrowing reveal an improvement in research, not a decline. Evans noted that experts searching online "bypass many of the marginally related articles that print researchers skim" (399).

Electronic searches quickly lead researchers to the sources most relevant to their inquiries. Consequently, the researchers spend less time consulting articles that relate only somewhat to their work. To Evans, this change has led to less thorough background reading and less variety of sources. In other eyes, however, the change has led to efficiency. Instead of reading a series of extraneous articles, researchers can now find the most important research with greater speed (Wray). Because more researchers are consulting these important texts, they might have more common ground with one another. Their shared reading might encourage cooperation and dialogue that help to advance ideas at a faster pace (Tuhus-Dubrow). Conceivably, the possible narrowing effect that Evans identified could have positive influences on research.

Figure 2.5—Comparison of print and electronic information

	<u>Print Information</u>	<u>Electronic Information</u>
<u>Accessibility</u>	<i>limited by physical location</i>	<i>physical location not a factor</i>
<u>Number of Sources Available</u>	<i>large at universities, limited elsewhere</i>	<i>huge everywhere; sorting difficult</i>
<u>Gatekeeping</u>	<i>heavy: only a few can publish, but false and misleading info filtered out</i>	<i>minimal: majority can publish, but false and misleading info published more often</i>
<u>Updates</u>	<i>done in new editions; take years, and old copies outdated</i>	<i>central copy updated; instantly available to all</i>
<u>Searchability</u>	<i>indexes used; researcher turns pages within documents</i>	<i>applications used to search for and within documents</i>

No one can deny the Internet's potential as a tool to further human knowledge, but the tool is not perfect. Maintaining a focused search and finding credible sources can be challenging. Even those who are well-practiced in uncovering information online

might unintentionally narrow the scope of their research. Anyone using the Internet to find information needs to be aware of the particular difficulties of electronic research. Accordingly, the next section of this chapter presents advice for online research.

Considerations for Online Research

Internet users must make choices when seeking information. A host of sources is available, and just automatically clicking on the first Webpage on a list of search results is not a good search strategy. The kind of source that a user should consult depends on the nature of the information sought, and some of these sources are easier to find than others. Users must carefully consider where to look for information, how to search for that information, and whether the information uncovered is sufficiently credible.

What Sources Should I Use?

Different sources of information should be consulted for different purposes. Consider a fan who wants to learn about the musical influences of rapper Lil Wayne. To whom should he turn for opinions?

The answer depends on the individual's purpose for seeking information. If the fan wants to entertain himself by talking about Lil Wayne's music, he might chat with random people using a Website. Their opinions on the rapper's influences might be right or wrong, but they could spark lively discussion either way. On the other hand, if the fan wants to write a formal review of Lil Wayne's album *Tha Carter III*, he might want the opinions of recognized experts. In this case, the fan would be better served reading about Wayne's influences in magazines like *The Source* or *Vibe*, written by people who are familiar with a wide variety of rap artists. Such professional writers, however, would not know much about the fan's personal taste in music. Therefore, if the fan wants to find

similar artists whose music he might enjoy, he might be better off talking to a friend who also likes Lil Wayne. Compared to reviewers for magazines, the friend would likely be less knowledgeable about past rappers who influenced Lil Wayne. But because the friend has a better understanding of the fan's musical preferences, he might be able to give more helpful recommendations.

Internet users must make similar decisions when seeking information. Will the opinion of a random person be helpful? Or would the user be better off reading the thoughts of an acknowledged expert? Does the user need to read an original document five decades old, or does the user need the most up-to-date information? When looking for information online (or offline), the researcher must first consider what kind of source to consult. People use the Internet to find information on an incredible variety of topics, and the same "rules" do not apply to all these kinds of searching. As researcher Miriam Metzger points out, academic research requires the use of high-quality sources that are credible according to traditional definitions of the word. But for other types of information-seeking, the user should follow different standards (Harris 168).

For some kinds of casual information gathering, a person might find the views of everyday people the most useful—even if that information would not be suitable for more scholarly purposes. A man seeking a recipe for how to roast zucchini, for instance, does not necessarily need to consult graduates from a culinary school. He might get just as good a recipe from an anonymous Internet user, or from a friend on Facebook. The man might also find an excellent recipe by turning to a Website with crowd reviews. If 29 users gave a recipe four out of five stars, the recipe is probably a good one, even though it is likely that none of the reviewers are trained chefs. Crowds can be helpful when one

seeks general ideas that do not require expert verification. Someone who wants to purchase a tent, for instance, might get valuable information by reading customer reviews. But even in this case, the buyer needs to consider the sources of information as much as practicable. A hiker who has used tents for the past 30 years might leave different comments than an inexperienced man who bought the tent for his children to play in. Users must always consider the point-of-view of the sources they examine.

Web users can also find extremely basic, factual information without worrying too much about a source's credibility. Simply cross-checking information with other sources would probably suffice in these cases. Even amateur Websites about the Civil War are likely to give the correct date of the Battle of Antietam, for instance. Similarly, any source that discusses Fulton Lewis Jr. is likely to reveal that he was a political commentator with a radio program in the mid-20th century; and any Website listing official state flowers will, in all probability, correctly identify the sego lily as the flower of Utah. Such basic facts are not arguable and are unlikely to be misrepresented. A user looking for basic information of this nature can probably assume Webpages to be accurate. While the creator of a Webpage could possibly have erred, the user can easily double-check the information by looking at another source. If different sources agree about such basic facts, the information is probably true.

However, when users desire information of a disputed or time-sensitive nature, they must select sources more carefully. The date of publication becomes extremely important for some data. If a user wants to know how many movie theaters currently exist in the United States, she should not consult a Webpage last updated in 1999 because the figure has probably changed. Similarly, a user who wants to know about treatments

available for a disease probably needs up-to-date information published after recent medical advances. Even an article written by a world-renowned doctor is likely to contain inaccurate information if it is too far out of date. Internet users must also realize that even Webpages that correctly list basic information may not be credible sources for other knowledge. A Webpage might give the correct date for the Battle of Antietam, but that does not mean that the page's creator can accurately describe the strategies used by Confederate generals.

When looking for information that is more complex, uncertain, or disputable, the user needs to search for a credible source created by people with some level of expertise. For example, any Webpage about Alger Hiss can tell a user that he served in the U.S. government and was accused of espionage in 1948; those facts are not arguable. But even 60 years later, some people dispute the charge that Alger Hiss was a Soviet spy. Users wanting information about Hiss's guilt or innocence would have to exercise care when choosing sources. Along the same lines, a user researching Wikipedia should consider sources carefully when reading about whether teachers should encourage students to use Wikipedia or ban it, as opinions are sharply divided. Even information about the origin of the drum set is uncertain, with different Webpages offering different stories about why and when musicians began putting drums together. The "wisdom of the crowd" might help users to find quality recipes and consumer information, but for other information, users should turn to sources with recognizable credibility.

The Nursery Rhyme of Death—Or Not

Many schoolchildren have heard that the rhyme "Ring around the rosie" actually refers to the bubonic plague, the "Black Death" that killed millions of Europeans. The

evidence suggests otherwise, however. According to Ian Munro, the earliest printed version of the rhyme appeared in 1881—approximately 125 years after the last outbreak of the plague in England. Given that several people devoted their energy to collecting and recording nursery rhymes, it is extremely unlikely that “Ring around the rosie” was invented during the plague years in England. If it was, the rhyme would have appeared in print much sooner (“‘Ring around the Rosie’ Mini-FAQ). Munro, who received a Ph.D. from Harvard University and who studies the popular culture of the time period, would know what he is talking about (“UC Irvine...”)

Nonetheless, several Webpages continue to proclaim that the nursery rhyme alludes to the plague. Searching Google for “ring around the rosie black death” yields several results. Of the first five results listed in late March 2010, only one Webpage correctly declared the origin myth to be false.

The image shows a Google search interface with the query "ring around the rosie black death". The search results are displayed below the search bar. The first result is from rhymes.org.uk, the second from snopes.com, the third from associatedcontent.com, and the fourth from medieval-life.net. A box with a pointer highlights the snopes.com result, which is titled "snopes.com: Ring Around the Rosie" and contains the text: "Jul 12, 2007 ... Is the nursery rhyme 'Ring Around the Rosie' about the Black Plague? ... or clearly have nothing whatsoever to do with death or disease. ...".

Google ring around the rosie black death Search Advanced Search

Web Show options... Results 1 - 10 of about 73,400 for ring

Ring around the Rosy rhyme
Connections to the Bubonic Plague (**Black Death**)? The words to the Ring around the rosie children's ring game have their origin in English history
www.rhymes.org.uk/ring_around_the_rosy.htm - [Cached](#) - [Similar](#)

snopes.com: **Ring Around the Rosie**
Jul 12, 2007 ... Is the nursery rhyme 'Ring Around the Rosie' about the Black Plague? ... or clearly have nothing whatsoever to do with death or disease. ...
www.snopes.com/language/literary/rosie.htm - [Similar](#)

Ring Around the Rosie is About the Bubonic Plague - Associated ...
There are so many people that sing, "Ring Around the Rosie. ... The Bubonic Plague: A Look Inside at the "Black Death" of Europe ...
www.associatedcontent.com/.../ring_around_the_rosie_is_about_the.html - [Cached](#) - [Similar](#)

Black Death
The **Black Death**, ravaging medieval Europe from late 1347 through early 1351 wiped out nearly ... "Ring around the rosie, A pocketful of posie, Ashes, Ashes, ...
www.medieval-life.net/black_death.htm - [Cached](#) - [Similar](#)

Modern Day Bubonic Plague and Black Death - symptons, treatments ...
Facts about the consequences of the Bubonic Plague and **Black Death** in the Modern ... The words to the **Ring around the rosie** children's ring game have their ...
www.william-shakespeare.info/bubonic-black-plague-modern-day.htm - [Cached](#) - [Similar](#)

correct Webpage

These search results prove that Web users must be careful when choosing sources for anything but the most basic facts. False information exists even about songs more than a century old.

When performing formal research that will be presented to others, Web users must painstakingly evaluate sources to determine that they are credible. Users might use a search engine to find Webpages, then examine those pages individually to determine their credibility. Alternatively, the user might search within a particular publication. *The New York Times*, the *Washington Post*, *The Los Angeles Times*, *Newsweek*, *Time* magazine, and other publications maintain electronic collections of articles dating back several years. While there are no standards of quality for the Web, the editors of these publications oversee the articles on their Websites. Articles within these sites are therefore held to a higher standard of credibility than common Websites. Searching within the Website of a respected publication can yield reliable sources for most kinds of research.

Even so, users must be aware of the characteristics of newspaper and magazine Websites that could affect their research. Many sites allow users to leave comments about articles, completely unreviewed by editors. Often, these comments contain argumentative ideas and assertions from uninformed people. News pages also contain advertisements that should not be mistaken for the sites' content. Furthermore, many news organizations pay bloggers to express opinions on their sites. Just as with letters on the editorial page of a newspaper, users need to remember that bloggers often express personal opinions with which others may disagree. In some cases, whole news organizations have been accused of bias. Republicans have charged that *The New York*

Times, for instance, slants its articles to support Democratic ideas and candidates; Democrats have similarly charged that Fox News biases its news coverage toward Republican causes. The Websites of respected news organizations can be excellent sources for research, much more reliably so than general Websites. But as with all sources, users should carefully consider the perspectives from which information and ideas come.

Subscription databases are a high-quality alternative to the resources available freely on the Web. School and university libraries pay to subscribe to these services, such as EBSCO and ProQuest, which index articles from thousands of publications and journals. A user must be affiliated with the subscribing library or university to access these services, so they are not available to everyone. However, the services include only reputable publications within their indexes, so the average quality of the articles included is far higher than the average quality of Webpages found through a search engine. Some of these databases are assembled with high school students in mind, while others are intended for more advanced research. Researchers at the collegiate level value the access the databases give to **scholarly journals**—publications containing articles written by experts within a given field and intended for other experts—and **peer-reviewed journals**—scholarly journals that only print articles that have already passed critical assessments by scholars besides the author (“Finding Peer-reviewed or Refereed Journals”). These journal articles are typically too complex for users just doing casual information lookup. But for users doing serious academic research, these journals are sources of the greatest possible quality and credibility. Subscription databases generally cost too much for an individual to afford, but people associated with institutions like

schools, universities, and libraries can often access them. The number and type of subscription services available varies by institution.

Academics and teenagers alike need to determine which sources are most appropriate for their needs. Not every query requires an answer from a peer-reviewed journal; an article from a newspaper might be equally suitable, and at other times, a fact pulled from someone’s homepage might do the job. Internet sources cannot be divided neatly into “good” and “bad” lists. Everything depends on the context for the research.

Figure 2.6—Selecting sources for different kinds of information

	<u>General ideas and opinions</u>	<u>Basic facts</u>	<u>Complex, disputed, or uncertain information</u>	<u>Information to be formally presented</u>
<u>Examples</u>	<i>best classic rock songs</i>	<i>date of Battle of Antietam</i>	<i>whether teachers should encourage Wikipedia use</i>	<i>research paper on climate change</i>
	<i>recipe for roast zucchini</i>	<i>profession of Fulton Lewis, Jr.</i>	<i>reason why drums first arranged into sets</i>	<i>presentation on Roman military</i>
	<i>good time to travel to Disneyland</i>	<i>class of Komodo dragon—reptile or amphibian?</i>	<i>guilt or innocence of Alger Hiss</i>	<i>diagram of volcanic eruption</i>
<u>Type of source needed</u>	<i>any</i>	<i>any</i>	<i>source with expertise</i>	<i>source with expertise fitting required level [high school vs. college vs. professional]</i>
<u>Method of verifying information</u>	<i>evaluations from crowd helpful</i>	<i>cross-reference other sources</i>	<i>evaluate source credibility</i>	<i>evaluate source credibility</i>

How Should I Search for Sources?

Sorting through billions of possible sources can be difficult, even with search applications. Effective searching requires a lot of patience and some creativity, as the first keywords entered might not take the user to the perfect source.

Small variations in keywords can yield different results. For example, searching for “Shakespeare language” on Google returns notably different results from a search for “Shakespeare’s language.” The first ten results appear in an almost completely different order, and three results only appear on the first page of one search or the other.² If just adding an apostrophe and the letter “s” can have such an impact, consider the effect of changing whole words. Searches for the following sets of keywords will return widely varying results:

- military spending
- military budget
- armed forces budget
- department of defense spending

All of these searches deal with the same topic, but that does not mean that they yield the same Webpages.

Whether they are scouring a subscription database, the World Wide Web, or a particular Website, users should be prepared to change their keywords if searches do not lead to hoped-for results. Rewriting the search phrase using similar words, as shown above in the “military spending” example, can sometimes help users find what they seek. Users might have to change search terms to avoid words with multiple meanings.

² As of March 31, 2010.

Searching for “fords,” for instance, might bring Websites relating to models of cars, industrialist Henry Ford, President Gerald Ford, and the theater in which Abraham Lincoln was shot. Similarly, a search for “apples” yields results relating both to computers and fruit (“Speed Searching” 42). In both instances, a user would find more targeted results by adding keywords and making the search less ambiguous. For some searches, the user may need to use language specific to the area being researched. If a user wants data about the highest level of school reached by an average person, “highest level of school” does not yield results as good as “educational attainment” (“Speed Searching” 43). The phrase “educational attainment” is frequently used in statistical studies, while “highest level of school” is not. Finding the more technical phrase within a source and then using that phrase for a new search improves results.

Got some time?

Think of a topic that you recently read about or studied, whether in a newspaper, a class, a book, etc. Make a list of all the different words and phrases you could enter as keywords when searching for information about that topic. Substitute different words in any way you can think of, even if the change seems to be small. Use the examples on pages 41-42 to spur your thinking.

Once you have finished brainstorming and have a list, go to your favorite search engine and see how the results change as you alter the search terms. How similar or different are the results? Which keywords gave you the “best” results?

At other times, the user might need to make a search more or less specific. Entering “to kill a mockingbird” as a search term might not give the desired results, but “to kill a mockingbird antagonist” or “to kill a mockingbird awards” might prove more

helpful. Using more specific search terms helps to sort through Webpages quickly. On the other hand, some searches exclude valuable results because they are too specific. Searching for “ancient Roman military policies and practices” might prove problematic. A search for “ancient Roman military” or “ancient Roman army” might turn up more helpful Webpages that still contain the needed information, even if the whole page is not dedicated to the topic of Rome’s military rules. In short, users should not assume that they can get perfect results with their first set of keywords. Nor should they assume that the first page of results contains the best sources. Finding a credible and helpful source sometimes requires digging through several pages of results, and users might have to click on multiple hyperlinks before finding the best source.

The Power of Suggestion

Users attempting to find the best keywords for a search should consider the suggestions offered by the search application. Google, Bing, Yahoo!, and many subscription databases present users with lists of “related searches” or “similar topics.” While these topics are not always relevant to the user’s research, they can sometimes provide much-needed inspiration.

Just reading the brief description on the results page is not always enough; users have to go to the source itself to fully determine its usefulness. Too often, inexperienced searchers give up on a list of results as soon as they give it a hasty glance. Sources can have the information needed even if they have a different title or focus. For example, imagine someone searching a database for articles about alcohol causing aggressive behavior. There might not be articles titled “Alcohol Causes Aggression” or “Studies Show Alcohol Leads to Violence.” But if the database contains an article about the link

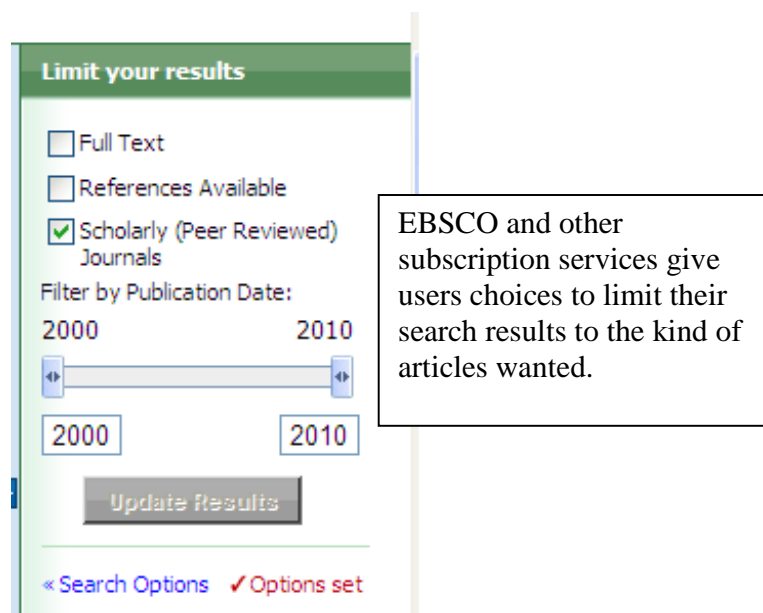
between alcohol and spousal abuse, that article might well contain the sort of details that the user wants. Searching is not as simple as typing the magic word and having sources appear out of thin air. Searching is a process that requires thought, time, and flexibility.

Searching with different search engines or within different databases can turn up varied results. Search engines like Google, Bing, and Yahoo! maintain their own indexes of Webpages. While these indexes have billions of pages in common, they are not identical. In some cases, a Webpage might only be available through one search engine (“Switching Your Search Engines”). The problem of exclusive content is even more pronounced when searching through subscription databases. Many such services compete with one another, and they have agreements with different journals. A journal with articles available in a Sage collection, for instance, might not appear within a JSTOR or WilsonWeb database. If users only search within a particular database, they might never discover relevant articles published in journals not archived within that one database. To alleviate this problem, users should search within several databases. Users should also consider using Google Scholar (<http://scholar.google.com>), which scans through a wide number of journals regardless of which subscription services paid for the rights to them. Google Scholar only provides citations for most articles, not the articles themselves, but it can still point users toward possible sources. Most universities have a journal locator on their library Webpages. Once a user identifies a possible source within a journal through Google Scholar, a journal locator can tell the user which subscription service (if any) contains articles from that journal. The user can then access the needed subscription service through the library Website and search within it for the desired

article. Utilizing Google Scholar in this fashion enables the user to search across many subscription databases at once.

The search features within subscription databases vary, but most of them contain some common elements. The user can search for articles that fall within a specific timeframe. This option can be helpful when the user requires either recent or past information. Users can also choose to search through articles by subject, author, title, publication, and other categories. To assist users in scanning through articles, most subscription databases provide brief summaries of articles called **abstracts**. Abstracts allow users to sample articles quickly. The list of search results might sometimes contain information about articles and abstracts even if the full text of the article is not within the service's collection. In most cases, though, the user can read the full text of the article by clicking on a link to an HTML document or to a PDF file, which generally contains an image of the article as it appeared within the original publication. Should the user decide to include information from the article within a paper or other project, the database will include all bibliographic information necessary to create a formal citation.

Figure 2.7—Search options within an EBSCO database



No matter where users elect to search for information, they must be ready to adjust their search terms and options to achieve better results, and they carefully examine those results to find relevant material. Effective searching involves much more than pushing a button; it is a process.

How Do I Evaluate the Credibility of Sources?

As previously noted, the level of credibility needed depends on the researcher's purpose. A person seeking basic information or amusement need not be concerned with a source's reliability to the same degree as a student writing a paper. On the other hand, a graduate student researching a doctoral dissertation requires sources of greater credibility than would a high school student preparing a one-page report. The graduate student would probably rely on peer-reviewed journals, whereas the high school student could use information from the homepage of a social studies teacher. The nature of the task determines the requirements for sources.

In many instances, searching within a subscription database or the Website of a respected publication can minimize the need to evaluate sources for credibility.

Searching the Web at large is an entirely different matter. A page of Google results is likely to contain as much garbage as treasure, if not more. Researchers using the Web must assess the credibility of the pages they visit.

Many teachers have recommended that students use pre-constructed checklists to determine the credibility of sites, but the checklist method has serious limitations (Harris 166). By focusing on a series of requirements, the theory goes, students can select appropriate sources. In practice, however, rigid checklists do not always fit the Websites students find. Websites do not follow a standard format, and no set of established guidelines exist that prescribe the information a Website creator must provide. Consequently, checklists sometimes force students into “yes” and “no” answers when “yes, but...” and “no, unless...” might be more appropriate (Harris 166). Additionally, strict reliance on checklists can lead to simplistic and sometimes false assessments of credibility. Non-credible or quasi-credible sites sometimes fulfill the technical requirements of checklists despite flaws. Credibility evaluation cannot, unfortunately, be reduced to a series of yes-or-no questions. Even if the checklist method was perfectly effective, too many students fail to use it when working independently (Harris 166). If students perceive checklist requirements as a series of complicated hoops through which they must jump, then they will only use them when forced to.

Perfect evaluation of a Webpage’s credibility requires consideration of several factors. Ultimately, the people best qualified to judge the quality of information are those with contextual understanding and specialized knowledge of the subject area. But the

Web is for everyone, not just individuals possessing expertise or a broad base of general knowledge. Everyday people must have a simple guideline that allows them to evaluate online sources. The author of this text recommends answering a simple question: “Who is presenting this information?” While the best evaluations of credibility are multifaceted, this “who?” test is simple enough for everyday people to use at any time, and it allows flexibility in a way that checklists do not. The “who” test is too basic to be perfect, but it can guide users to select credible sources in most cases.

Identifying the individual, group, or institution behind information can help a Web user to determine how reliable that information is. The user should always imagine stating, “I know _____ is true because _____ told me so.” For instance, a man who spent time at www.nasa.gov might say, “*I know Jupiter is a gaseous planet because NASA told me so.*” Clearly, that statement is logical. On the other hand, a man who found a third-grader’s class project online would feel more than a little silly saying, “*I know Jupiter is a gaseous planet because an eight-year-old told me so.*” Users who do not bother to identify sources of information are, essentially, declaring, “*I know Jupiter is a gaseous planet because a random stranger on the Internet told me so.*”

Considering a source’s credibility in these uncomplicated terms can prevent a user from trusting many unreliable sources.

Users should also consider their audiences when evaluating sources. Adding to the simple statement above, users can simply include the name of the person or group to whom they are giving the information. A student in a high school chemistry class, for instance, might well say, “Class, I know this information is true because my middle school science teacher told me so.” The former teacher’s level of expertise would likely

be appropriate for a high school course. Six years later, however, the same student would be unlikely to make the same statement to the university professor teaching Organic Chemistry II. If the student is not willing to stand before her professor and say that her knowledge came from a middle school teacher, then the student should not consider using that teacher's Webpage in her research.

Finding out who is responsible for information on a Webpage is not always as easy as reading the author's name at the bottom of the page. For one matter, the name of the writer may not mean much by itself; the user needs to know more about the writer than just a name. One cannot trust information about the pyramids just because Lanny D. Bell wrote it—unless one also knows that Lanny D. Bell is an associate professor of Egyptology at the University of Chicago. Confirming the credibility of a source might require further investigation, such as entering a writer's name within a search engine. In other instances, a group or organization may be listed in place of a single author. Then, the user must ask new questions.

- Is the group composed of true experts or simply people with an interest in the topic?
- Is the organization presenting information objectively, or is the organization trying to persuade visitors to assume a particular point-of-view?
- Is the group or organization trying to sell something?

This list of questions, while helpful, is not complete. The Web is filled with billions of Webpages created by millions of people and groups, and no set list of questions can hope to cover every possible situation. Users must analyze sources using their own judgment,

trying to determine as best they can whether the writers are credible (*see section "Evaluating Credibility: Examples"*).

Original Sources

Whenever possible, researchers should use original sources instead of relying on someone else's summary, paraphrase, or quotation of that source. When surfing the Web, researchers are likely to find blogs that refer to articles published elsewhere. Bloggers frequently include summaries or quotations of others' work, then offer their own commentary. Most respected bloggers also include links to the original source. Researchers should use these links to get information straight from the source, instead of second or third-hand. Otherwise, researchers are essentially falling prey to the same mistake as gossipers: "I know this is true because Johnny told Sally who told Billy who told me." Bloggers' commentary can prove illuminating, but for an understanding of the original story, researchers should read the original story.

Evaluating a source often requires navigating away from the Webpage itself and going to the homepage. Users wanting to gauge credibility frequently need information about the entire Website, not just one page of it. Suppose a user looking for information about "birth control" connects to a Webpage through a search engine's results list. The search engine will likely bypass the homepage for the Website, leaving the user unsure of the site's orientation: is it a political Website, a medical Website, or a religious Website? (Harris 163). Three sites with these varying purposes could all discuss the topic of birth control, but the information available and the tone in which it is presented might differ significantly. Any of the sites might be valuable, depending on the user's purpose for seeking information. But unless the user identifies the type of Website containing the

information, he cannot accurately judge it. Frequently, Webpages contain links to the homepage or main page of the Website. If the Webpages do not, a user can go to the homepage by adjusting the Web address. Once there, the user might quickly discover what person or organization created the Website. If this information is not immediately apparent on the homepage, then the user might need to follow a link labeled “About Us,” “About this site,” “About the author,” “FAQ” (frequently-asked questions), or something similar. These links generally provide information that enable the user to judge the Website’s credibility.

For example, a user looking for information about the spread of the printing press could find some here:

- <http://www.historyguide.org/intellect/press.html>

The Webpage identifies itself as a “lecture” and part of “The History Guide,” includes a quote by famed writer and historian Thomas Carlyle, and displays well-written text with a professional appearance. None of those details, however, demonstrate credibility; nor does the inclusion of the author’s name, Steven Kreis. Furthermore, the Webpage gives no indication of the sources used to research the information about the printing press.

Most people who examine only the Webpage of the printing press cannot possibly evaluate its credibility with any certainty. Consequently, users should navigate to the Website’s homepage, either by clicking on the link to “The History Guide” at the bottom of the page, or by typing the site’s main address:

- <http://www.historyguide.org/>

Once at the homepage, the user sees a hyperlink to information “About the Author.” Both this linked biography and Steven Kreis’s curriculum vitae (his academic resumé)

reveal that he received a doctorate in history from the University of Missouri-Columbia in 1990. Having found this detail, the user can trust in the Webpage's information. Anyone would feel safe in making the statement, "I know how much Gutenberg's Bibles cost in 1455 because a person with a doctorate in history from the University of Missouri told me so." The Webpage alone could not inspire such confidence, but in this case, information linked from the homepage can.

Some users may have assumed that they could trust this information about the printing press because it came from a site with a ".org" extension, but this reasoning is false. Websites with addresses ending in .org, or even .edu, are not necessarily more credible than .com Websites. Not all .org sites have an organization behind them. The History Guide, for instance, seems to belong solely to Steven Kreis. Furthermore, not all organizations are credible, as the examples elsewhere in this chapter illustrate. Neither should a user trust information just because the .edu extension appears in the Web address. A number of colleges permit students to include information on their Websites, and students do not have the same credibility as professors. Additionally, not all educational institutions are created equal: some schools of questionable quality have managed to acquire .edu addresses (Lorenzen 159). The .edu extension does not guarantee credibility.

The Nutty Professor

In one controversial case, Northwestern University hosted a Webpage denying the existence of the Holocaust. Tenured professor Arthur Butz claimed that Jews and the Allied forces of World War II fabricated the deaths of the millions who died in Hitler's concentration camps. He created a Webpage on the Northwestern University

Website stating his beliefs. In 1997, Northwestern President Henry S. Bienen explained that because of a belief in freedom of speech, the university would not insist that Butz remove his Webpage—no matter how infuriating others at Northwestern found the false claims on it. “His ideas are odious,” stated Bienen, “but I don’t want to say he can’t have them” (“Defending Your Lies”).

Users who trusted all information on .edu sites might have been fooled by Butz’s claims (which have since been removed from Northwestern’s Website). Users who insisted on knowing who posted information, on the other hand, would likely have dismissed Butz’s Webpage: Butz is a professor of engineering with no expertise in history (“Defending Your Lies”).

Information appearing on Websites with .gov extensions, maintained by the United States government, tend to have valuable information presented by various agencies, such as the Department of Defense, the Food and Drug Administration, and the Environmental Protection Agency. Users should nonetheless beware of politically-slanted content on government sites connected to individual politicians. The official White House Website, for instance, includes a number of accurate and objective facts about how the U.S. government works, but it also contains links to pages promoting the agenda of the current President. Information on these pages, while probably true, has been selected to support the administration’s viewpoint and undercut opponents’ arguments. Depending on whether a Democrat or a Republican serves as President at a given time, these pages are likely to hold markedly different content.

Consideration of the advice given in this section should aid users in screening Webpages for credibility. But because Webpages take so many different forms, reading about general practices cannot prepare a user for every situation. Users learn most effectively by confronting actual examples. To this end, the next section of this chapter offers a few examples of reliable and unreliable sources.

Evaluating Credibility: Examples

This section walks readers through the evaluation of three different Webpages, demonstrating the kinds of issues that arise when researching on the Web. Familiarity with these examples should aid readers in evaluating the credibility of Webpages happened upon in their own work, not to mention the Webpages offered for practice in “Exercise: Evaluating Credibility.”³ Readers are encouraged not to rely solely on this text, but to navigate to the Webpages in question and follow the steps described.

Example #1

“Factors Causing Teen Pregnancy”

<http://ezinearticles.com/?Factors-Causing-Teen-Pregnancy&id=1321756>

This article within the Ezine Articles Website lists four factors that author Melissa Fox states can lead to teen pregnancy. The bottom of the page provides a link to the article’s source: “Ezine Articles expert Melissa Fox.” This explicit reference to Fox’s expertise seems to assert her credibility, as does the Webpage’s statement that “Melissa Fox is a health professional very interested in Teenage Pregnancy.” A casual reader would likely assume that an article by a health professional could be trusted to share information about teenage pregnancy.

³ The descriptions of the Webpages used in the examples and exercises were current as of March 31, 2010.

Further investigation, however, reveals that Melissa Fox should not be considered a credible source of medical information. The vague designation “health professional” raises more questions than it answers. If Melissa Fox was a doctor, the article would likely say so. The words “health professional” therefore indicate the author’s limitations, not her expertise. “Health professional” might mean that she works as a nurse, but Melissa Fox might also be the receptionist at a dentist’s office. Clicking on her name takes the reader to a brief biography that does not add much information; nor does the “extended author bio” tell more about Fox. The extended biography does, however, contain a “Business URL.” This Web address—www.causesofautism.org—leads the user to a site incorrectly claiming that childhood vaccinations can cause autism. Experts have dismissed these claims as false on numerous occasions (McNeil). The fact that Melissa Fox lists a medically incorrect Website as her business Web address calls her credibility into serious question. Users should, at best, regard her as having no knowledge beyond that of any other everyday person.

A user with a critical eye might have begun to question Fox’s article even without the information in her biography. In terms of content, the article contains no sources and no data. All of Fox’s information smacks of personal opinion, with no scientific evidence for support. Furthermore, the Website Ezine Articles belongs to a troubling category of Websites that also includes Associated Content and Essortment. These sites publish articles by almost anyone who wants to submit them, without any real input from editors or other users. They often proclaim the authors of articles to be “experts” no matter what their actual qualifications. An excerpt from the disclaimer printed at the bottom of Essortment articles makes the problem clear:

We are only publishers of this material, not authors.

Information may have errors or be outdated. Some information is from historical sources or represents opinions of the author. It is for research purposes only. The information is "AS IS", "WITH ALL FAULTS". (Baxter)

The sites do not take any responsibility whatsoever for the content of articles. According to the sites, mistakes within articles are the problems of the authors—and naïve Web users who do not evaluate the credibility of their sources.

Example #2

“Energy Security”

<http://www.energytomorrow.org/energy/>

This Webpage asserts that the United States needs to follow public policies that expand supplies of natural gas and oil. The Webpage states that exploring deposits in areas currently off-limits—such as the Arctic National Wildlife Refuge (ANWR)—could provide a significant boost to American oil supplies. According to the Webpage, “Policies that will allow energy companies to make the most of the energy resources we have here at home are crucial to the U.S. economy.”

No author is listed for the article, but the copyright is attributed to API. The page does not explain what the acronym stands for. However, clicking on the small “Who We Are” link at the top of the page reveals that API stands for “The American Petroleum Institute,” an organization representing the oil and natural gas industry. That the pages within energytomorrow.org favor increased drilling and fewer taxes on the oil industry should come as no surprise: the Website exists to promote the views of the oil industry.

Someone who trusts the views and information on the site is essentially saying, “I know the oil industry should be allowed to explore for more oil because the oil industry told me so.” The information contained within the API-sponsored Website might be useful to researchers, but they must remember that the source of information is self-interested. The API includes information that supports its arguments and excludes information that could portray the industry’s activities in a negative light.

Example #3

“Wolfgang Amadeus Mozart”

<http://w3.rz-berlin.mpg.de/cmp/mozart.html>

This Webpage, part of a collection called the Classical Music Pages, describes the life and career of composer Wolfgang Amadeus Mozart. While the page is old by the Web’s standards—created in 1996 and last updated in 2000—its focus on history means that currency of information is less of a concern. Users accustomed to selecting sources based upon Web addresses might bypass this site because of the unfamiliar “.de” extension. A .de extension indicates a German Website, so English-speaking Web users have probably not seen many such URLs. As aforementioned, Web addresses have no real bearing on sites’ credibility.

The information given on the Webpage is attributed to *The Grove Concise Dictionary of Music*, published by Macmillan Press, a well-known publisher. This source alone lends the information credibility. Most people would feel confident when saying “I know Mozart’s death did not result from poisoning because *The Grove Concise Dictionary of Music* told me so.” For an extra layer of credibility, the user can investigate the creator of the Webpage, Matt Boynick. Because the Webpage is out of

date, the link labeled “Matt Boynick” no longer works, but a Google search quickly reveals who he is. The first results are links to the Classical Music Pages, but a Webpage from Answers.com appears as well. That page contains a short biography of Boynick that reveals an education at Millsaps College, the College Conservatory of Music at the University of Cincinnati, and the German Ludwig-Maximilians-Universität. Additionally, Boynick established his own orchestra outside Munich and has taught master classes at music festivals. Combined with the citation of *The Grove Concise Dictionary of Music*, Boynick’s extensive background gives a user confidence in the accuracy of the Mozart article.

Exercise: Evaluating Credibility

For practice in evaluating credibility on the Web, go to these three Webpages and determine who is behind the information. How credible are these sources?

- “Antidepressant Medications.” <http://www.depression.com/medications.html>
- “Invention Timeline.”
http://www.renaissanceconnection.org/lesson_science_technology.html
- “Ancient Roman Military.” <http://www.crystalinks.com/romemilitary.html>

Walkthroughs for how to determine the credibility of these Webpages are at the end of this chapter.

Wikipedia

Wikipedia deserves special consideration in this chapter because of its prominence. Frequently, users of search engines find Wikipedia listed among the first few results, and often as the first overall result. Anyone who has surfed the Web knows of Wikipedia and has probably visited it. But Wikipedia remains controversial. Supporters think of the project as a “brave new world” in which knowledge is written by all, for all; critics believe that Wikipedia devalues expertise and propagates errors (Read). The site has become famous because of the amount of information it contains, but infamous because of the disapproval of teachers and scholars. Divided views on it prompted one high school student to quip, “Wikipedia is an essay’s best friend. Wikipedia is a bibliography’s worst enemy” (Harris 173). Sharply divergent opinions have dominated the debate over Wikipedia, as well as teaching about it in many classrooms. Ultimately, though, the question is not whether Wikipedia should be used. The relevant decision is how Wikipedia should be used.

The Development of Wikipedia

Founded in 2001, Wikipedia invited everyday people and scholars alike to contribute to its collection of information. Anyone could contribute to the site by editing or creating articles, so long as they agreed to write unbiased information and cite previously published material instead of original research (Read). The site grew rapidly. It contained more than 1,000 articles after a month and 20,000 after a year (Rosenzweig 121). By 2003, it had stretched to more than 100,000 articles in English, giving it a scope similar to that of online commercial encyclopedias. The site became more popular because it was freely available, unlike other encyclopedias at the time, so search engines could easily crawl through its articles. The site did not, however, use its rising number of

visitors to gain advertising revenue. The original plan had been for Wikipedia to financially support itself with ads. But because of objections from the user community, that plan was abandoned, and Wikipedia became a not-for-profit foundation, funded through donations (Philips). But as it grew, the site received increased media attention for its errors. In one particularly high-profile case, journalist John Seigenthaler wrote a newspaper article blasting his biography on Wikipedia for containing a “malicious” falsehood: a sentence stating that the journalist was thought to be directly involved in the assassinations of John and Robert Kennedy. This outright lie remained uncorrected for four months (Read).

Wikipedia did take some steps to improve quality, particularly after the Seigenthaler incident. For example, the site began to require users to register before they were permitted to create new articles (Read). The site also started to follow a policy of “semiprotection” that prevented newcomers from editing articles on controversial topics. In general, Wikipedians began patrolling for vandalism more aggressively and became more willing to block suspicious edits. In 2005, Wikipedia’s editors deleted one of every 10 edits from infrequent contributors; in 2008, that number increased to one in four (Angwin). The site eventually began to oversee some articles more directly. In August 2009, founder Jimmy Wales announced that Wikipedia would assign editors to some entries. All public changes to those articles have to be approved by the editor in charge before they can be put on the site. A number of observers hailed the change as progress (Sutter). But this and other policy changes might have cost Wikipedia something, too. The more restricted atmosphere on Wikipedia and the proliferation of rules caused frustration for many contributors. The number of volunteer editors on Wikipedia has

declined. During the first three months of 2008, the site lost 4,900 editors from its English language version. In the same period in 2009, that number rose dramatically, to more than 49,000 lost editors. The cause of this decline is unclear, but greater restrictions on editing Wikipedia could have turned off some volunteers from the site (Angwin).

The desire for greater accountability also led to more thorough citations in Wikipedia articles. As of April 1, 2010, for example, the article titled “American Civil War” includes 162 different citations indicating the origins of information in the text (see figure 2.8). Some of the citations refer to published books; others link to sources elsewhere on the Web. Such citations were not always a part of the Internet encyclopedia. In the early days of Wikipedia, contributors rarely indicated the sources used when creating or editing articles. Examining past versions of Wikipedia’s “American Civil War” article shows that on May 17, 2006, the entry included only five citations—sparse documentation. By encouraging the use of citations, Wikipedia increased both the credibility and the utility of its information. Users interested in learning more can refer to the books and articles cited within an entry.

Figure 2.8—excerpt from Wikipedia entry on American Civil War

Eastern Theater 1861–1863

For more details on this topic, see *Eastern Theater of the American Civil War*.



Because of the fierce resistance of a few initial Confederate forces at [Manassas](#) 1861, a march by Union troops under the command of Maj. Gen. Irvin McDowell forces there was halted in the [First Battle of Bull Run](#), or *First Manassas*.^[88] They were forced back to Washington, D.C., by the Confederates under the command of Joseph E. Johnston and P. G. T. Beauregard. It was in this battle that Confederate General Thomas Jackson received the nickname of "Stonewall" because he stood like a wall of Union troops.^[87]

Alarmed at the loss, and in an attempt to prevent more slave states from leaving the Union, the U.S. Congress passed the [Crittenden-Johnson Resolution](#) on July 25 of that year, which stated



Footnotes linking to citations. This version appeared on April 1, 2010. The same paragraph in the May 17, 2006 version, though nearly identical, contained no citations.

Wikipedia and the Crowd: Strengths and Weaknesses

Wikipedia's strengths and weaknesses both stem from its use of crowdsourcing. Accepting contributions from anyone, on any topic of importance, has led to a resource with incredible breadth, with more than three million articles in the English language version (Leppik). People with varying knowledge and interests have written many articles on topics that traditional reference works would not include, enhancing the scope of Wikipedia. The lack of editorial barriers and the large number of contributors mean that the site can be changed with great rapidity. Within hours of a tsunami striking the Indian Ocean in 2004, articles in Wikipedia were updated. Animations, geological information, and details of the international relief effort were all added. And when the identity of the Watergate informant known as "Deep Throat" was revealed in 2005, Wikipedia's article on the scandal named him before the day's evening news broadcast (Rosenzweig 136). This speed can also be used to correct errors. When a critic of

Wikipedia identified errors within Alexander Hamilton's biography, for instance, the errors were corrected within two days (Rosenzweig 136). In late March 2010, someone incorrectly changed quarterback Donovan McNabb's Wikipedia biography to state that the Philadelphia Eagles had traded him to the Oakland Raiders. The biography was fixed after just four minutes ("McNabb..."). Wikipedia's structure helps to counter such "vandalism." The site saves every previous version of each entry, so friendly contributors can easily "clean up" damaged articles (Antony 5). Having many editors therefore gives Wikipedia significant capacity for "self-healing" and improvement (Rosenzweig 136).

Believers in Wikipedia's peer production system have asserted that the site's large number of users guarantees improvement over time (Duguid). With so many eyes examining the Website, the argument goes, errors and deficiencies will eventually be noticed and corrected. Through a process of discussion and editing, an improved version will emerge. Proponents of peer production have stated the belief that, long term, quality material spreads, while lesser material is ignored (Duguid). These beliefs became popular because of the success of **Open Source software development**. In several cases, the individual efforts of several different programmers have been combined to create useful software—without assistance from schools, businesses, or recognized experts. These projects proved that, in some cases, a large group of people could work together and, one piece at a time, construct a whole from the many parts individuals contributed. Accordingly, innovators have attempted to apply the peer production process of Open Source software to other projects, like Wikipedia (Duguid).

However, the principles affecting such software development might not apply to the creation of an encyclopedia. For one matter, Open Source projects showed that peer production can help debug programs with glitches. But writing quality encyclopedia entries involves building, not debugging (Duguid). Software is designed to accomplish a specific task, and if the software does not work effectively, then a programmer must fix it. The software's code is either fixed, so that the software will work as desired, or it is not. Encyclopedia articles, on the other hand, cannot be classified as "working" or "not working." The articles are written to accomplish the considerably vaguer goal of explaining a topic. Writers must make decisions about what to discuss, how much to discuss it, whose interpretations should be included, and what words to use. One person might consider the article to be thorough, while another considers it to be missing key details. The matter is one of judgment. Whereas software development ends with a goal clearly achieved—the program or new feature works as desired—even a high-quality Wikipedia entry might be changed if a user finds fault with it. If that user lacks the needed knowledge or perspective, he might degrade the article while "improving" it. The lack of a clearly-defined goal might lead to erroneous "debugging" of Wikipedia articles.

Paul Duguid, professor at the University of California-Berkley's School of Information, examined the Wikipedia entry on writer Daniel Defoe to demonstrate how peer production could decrease quality. In the summer of 2002, the article stated:

- "[Defoe] is most famous for his novel *Robinson Crusoe*."

This assertion is true. But on January 30, 2004, the sentence was changed:

- "[Defoe] gained fame for his novel *Robinson Crusoe*."

This statement is less precise. While Defoe is best remembered today as the author of *Robinson Crusoe*, he was well-known in his own time even before the book's publication. Since the novel increased his renown, the statement is still defensible, albeit misleading. In September 2004, however, a new version of the Wikipedia entry included a rewritten version:

- “[Defoe] first gained fame for his novel *Robinson Crusoe*.”

This statement is false: Defoe became known in England for his pamphlets several years before he wrote *Robinson Crusoe*. Nonetheless, this version of the statement persisted on Wikipedia for over a year, and some Wikipedians “vigorously defended” the fallacious sentence before it was changed (Duguid). While the error was eventually corrected, the fact remains that a true statement was replaced with a false one, and the mistake remained part of the entry for an extended period of time. This example raises questions about whether peer production can be as effective for Wikipedia as for Open Source software projects. Editing by a crowd of contributors does not inevitably lead to a superior product. In fact, continued tinkering can sometimes decrease the quality of Wikipedia articles.

Allowing anyone to edit articles helped Wikipedia to grow, but the policy of open contributions created problems as well. As a former president of the American Library Association explained, “The problem with an online encyclopedia created by anybody is that you have no idea whether you are reading an established person in the field or someone with an ax to grind” (Read). Despite Wikipedia's stated goal of neutrality, people and organizations have changed articles to reflect their own views and purposes. Someone using a computer on Wal-Mart's network, for instance, once changed a passage

about the wages the company paid its employees, giving Wal-Mart a more positive appearance. Similarly, a user on a computer linked to the Dow Chemical Company deleted a reference to the infamous chemical disaster in Bhopal, India, in 1984. The deadly accident occurred at a plant owned by Union Carbide, which now belongs to Dow (Blakely). The previously mentioned falsehood that John Seigenthaler contributed to the Kennedy assassinations also shows how users with bad intent can alter Wikipedia. Other editors might correct such unscrupulous changes, but anyone who visits the entry in the meantime could receive incomplete or false information. Corrections to the most often-visited entries are likely to be made quickly, as the chances are greater that a user will spot the error. Additionally, articles overseen by editors in accordance with Wikipedia's August 2009 policy are much less likely to be damaged. But errors in entries that receive comparatively little traffic—such as the relatively obscure biography of Seigenthaler—are likely to remain longer (Read).

Wikipedians have proven to be more skillful at catching outright vandalism than correcting subtle errors, as two different experiments from 2004 demonstrated. A professor at the State University of New York at Buffalo inserted 13 errors into various articles. They ranged from the plausible—a false statement that Frederick Douglas lived in Syracuse, New York, for four years—to the silly—an assertion that the animated Disney film *The Rescuers Down Under* had won an Oscar for film editing. To the professor's surprise, all of the false facts had been deleted within three hours (Read). However, his insertion of obvious errors might have alerted Wikipedians and led them to review his other alterations. At approximately the same time, a blogger placed five subtler errors in different articles on different days, taking care to add only reasonable-

sounding information. None of these false statements had been deleted before the blogger himself removed them. The shortest-lived error was posted for 20 hours; the longest existed for five days without being questioned (Leppik). These informal experiments suggest that genuine-seeming mistakes last longer than nonsense spread by malicious users.

Figure 2.9—Semi-protected Wikipedia Entry



accessed April 3, 2010

Even if the information in a Wikipedia article is factually correct, the article's quality might be deficient in other ways. Separate sections of an article, written by different people, might not fit together neatly. An early version of the Daniel Defoe article, for instance, stated in its introduction that Defoe was well-known for his pamphlets, but failed to discuss those pamphlets anywhere else in the entry (Duguid). The introduction did not match the body. In other entries, users might pay scant attention to a topic that merits more description. One historian who wrote about Wikipedia in

2006 noted that a 4,000-word essay on immigration to the United States only mentioned famine-era Irish immigration once—in a picture caption (Rosenzweig 126). He also observed that Wikipedia articles seem to be developed based on popularity and currency, rather than according to importance. At the time the historian's article was published, the Wikipedia biography for science fiction writer Isaac Asimov was longer than that of President Woodrow Wilson (Rosenzweig 127). An editor of Encyclopedia Britannica noted that the Wikipedia article on Hurricane Frances, from 2004, was approximately five times longer than the article on Chinese art (Rosenzweig 128). Furthermore, contributors to Wikipedia entries sometimes give undue prominence to controversial theories (Giles 901). A casual visitor would not know that the majority of scholars reject such ideas. Everyday people have contributed extensively to Wikipedia, and they concentrated on different areas than academics would have.

The Accuracy of Wikipedia

Despite its flaws, several studies have found Wikipedia to be surprisingly accurate. In perhaps the most widely-discussed study, published in *Nature* in 2005, researchers found that Wikipedia's science articles were nearly as accurate as those in the Encyclopedia Britannica. The researchers sent out pairs of articles on the same topic, one from the online version of the Encyclopedia Britannica and one from Wikipedia. None of the articles were labeled as being from either source. The researchers requested reviews of the articles from 50 experts, forty-two of whom returned usable reviews (Giles 900). The experts found a total of eight serious errors, such as misinterpretations of concepts—four from Britannica and four from Wikipedia. The experts also identified a number of lesser factual errors, omissions, and misleading statements: 162 from

Wikipedia articles and 123 from Britannica articles (Giles 900-901). The results favored Encyclopedia Britannica as more accurate, but not by as wide a margin as some would have expected.

In 2006, historian Roy Rosenzweig found that some of Wikipedia's broad history articles suffered from troubling omissions, but his examination of several biographies "shed some favorable light on Wikipedia" (127). The entry on women in the history of the United States exemplified the unevenness of some Wikipedia articles: while detailed in some areas, it never mentioned the 19th Amendment, which gave women the right to vote (Rosenzweig 126). The biographies proved better, perhaps because biography draws more popular interest than other types of history, and perhaps because the focus of a biography is more clear-cut than other topics (Rosenzweig 126). Rosenzweig closely examined 25 biographies in Wikipedia, comparing them to similar entries in both the commercial Encarta encyclopedia and the specialized American National Biography Online, written by professional historians. He found clear factual errors in four of the Wikipedia biographies. This number is less troubling than it might first seem, according to Rosenzweig, because of the difficulty in getting every fact correct. Even the high-quality entries from American National Biography Online contained one error. Among the 10 Encarta biographies that Rosenzweig reviewed, three had errors (128-129). Wikipedia clearly exceeded Encarta in its breadth. Of a sample of 52 people listed in American National Biography Online, Wikipedia contained entries for half; Encarta contained entries for only one-fifth (Rosenzweig 128). Rosenzweig ultimately concluded that Wikipedia lags behind American National Biography Online, but roughly matches Encarta for accuracy and beats it for coverage. The "unpaid amateurs at Wikipedia,"

Rosenzweig wrote, “have managed to outstrip an expensively produced reference work such as Encarta and provide a surprisingly comprehensive and largely accurate portrait of major and minor figures in U.S. history” (129).

No one denies that Wikipedia contains errors. But studies like these have suggested that Wikipedia is accurate enough to be of some use.

The Usefulness of Wikipedia

The usefulness of Wikipedia stems, in part, from the lack of viable alternatives. In 2007, writers from Pandia Search Central investigated encyclopedias that were freely available online by comparing their articles on three topics. They examined Wikipedia, the Columbia Encyclopedia, Encyclopedia Britannica Concise, World Book Encyclopedia, MSN Encarta, and the Concise Hutchinson Encyclopedia. Of the five encyclopedias visited beside Wikipedia, only one (the Columbia Encyclopedia) gave full access to all its articles without requiring payment; all the other free versions of encyclopedias were intended as preview versions. The writers found that Wikipedia had no serious competition. It was the only free encyclopedia with any real depth of coverage (“Are there free...?”)

Efforts to create a more accurate online encyclopedia, overseen by experts, seem to have stalled. Citizendium, launched in March 2007, was intended as a more controlled version of Wikipedia in which experts would have a preferred place (Waters). The general public still writes most of the material appearing on Citizendium, though unlike on Wikipedia, contributors are required to register using their real names. Once articles have been written, expert editors can give their seal of approval to articles. Citizendium is founded on the belief that giving experts this role will eventually lead to a more

credible resource than Wikipedia (“Why Citizendium?”). The project has not, however, grown at anywhere near the pace of Wikipedia. By late August 2009, more than two years after its launch, Citizendium contained 11,810 articles. While these articles do constitute an achievement, the articles in Wikipedia’s English-language version outnumbered them by nearly 3 million (Waters). Citizendium added approximately 1600 more articles over the next six months (“Welcome to Citizendium”). At such rate of development, Citizendium can never hope to rival Wikipedia. The number of expert-approved articles provides an even bleaker indication of Citizendium’s prospects. As of April 1, 2010, a total of 121 articles had received the “approved” designation. The page listing approved articles had last been updated in May 2008 (“Category: Approved Articles”). The effort to involve experts has stagnated. Barring a dramatic turnaround, Citizendium will never be a major purveyor of information. Articles certified as credible by experts were supposed to set Citizendium apart from its competitor. Instead, their paltry number stands as an indication of the project’s failure.

With or without expert oversight, the value of free information cannot be overstated. As Rosenzweig noted, American National Biography Online might be a higher-quality source than Wikipedia, but it is only available to libraries that pay thousands of dollars per year. Wikipedia is available to anyone, so its impact is a great deal more sizeable (Rosenzweig 138).

Wikipedia can be helpful so long as users recognize its limits. The site is a basic reference only, one that can provide introductory information and a jumping-off point for new sources. But just as with printed encyclopedias of years past, users needing more

than a casual reference have to go to higher-quality sources. Rosenzweig explained near the end of his article in *The Journal of American History*:

Teachers have little more to fear from students' starting with Wikipedia than from their starting with most other basic reference sources. They have a lot to fear if students stop there. To state the obvious: Wikipedia is an encyclopedia, and encyclopedias have intrinsic limits. Most readers of this journal have not relied heavily on encyclopedias since junior high school days. And most readers of this journal do not want their students to rely heavily on encyclopedias—digital or print, free or subscription, professionally written or amateur and collaborative—for research papers. (137)

The problem with Wikipedia is not that students use it; the problem is that some students use it as a final authority, the end-point of their research efforts. Not even founder Jimmy Wales would advocate Wikipedia use in this respect. A 2006 article quoted him as saying, "I get an e-mail every week from some college student who says, 'Help me; I cited you and I got an F on my paper. I always say the same thing: For God's sake, you're in college now!'" (Read)

People should use Wikipedia as a source when they need information for casual purposes not requiring high credibility. Even then, users must remain aware of the likelihood that articles contain errors or omit relevant details. The broader the topic, the more likely omissions become. For academic research, Wikipedia should be used in only

a limited capacity. Topics and details within Wikipedia entries can give users ideas of how to refine their research. Furthermore, Wikipedia's citations and links can lead users directly to other sources. Those sources, if judged to be credible, can sometimes do much to propel research forward. But Wikipedia itself lacks the credibility necessary for serious academic research. To cite it implies an unfounded belief that it holds authority on a given topic. Wikipedia does not have such authority. As Jimmy Wales' remark illustrates, it was never intended to.

Conclusion

The Internet has revolutionized research as radically as the printing press once did. Information has become much more accessible. Physical location no longer constrains the efforts of researchers, and much information that was once financially out-of-reach can be accessed freely. Subscription databases that contain the highest-quality archives and sources remain connected to institutions like universities, but everyday people can easily access resources on the Web from home, including Wikipedia. Users must exercise care when searching for and consulting these sources, but their value is undeniable.

The four principles of the Internet set forward in Chapter One help to illuminate the ways in which it has changed research.

1. The Internet accelerates the speed with which information can be accessed and transferred.

Information can be updated instantly using the Internet, without the need to wait for a new edition of a newspaper, let alone a book. Electronic content can be changed immediately, and everyone can have access to the new material as soon as it is uploaded.

Information can also be found more quickly than before. Electronic search programs can take a user directly to desired sources and to sections within that source, without the user having to browse through pages or directories. Electronic search works so rapidly that in the future, memorization of information might become less important than it is today; users could access content on demand.

2. The Internet connects people and organizations.

Researchers can communicate with each other much more easily because of the Internet, expediting their research. Students, likewise, can contact teachers and experts around the globe more easily than before, opening up greater educational opportunities. Libraries, too, have become more accessible. Many of their resources can be accessed electronically, and the future will probably see an expansion of these remote capabilities. Because academics can access scholarly journals more easily, they now read more articles from a greater number of journals than in past decades. The capability to view sources from any computer with Internet access has brought a number of advantages.

However, having access to such a staggering number of sources can be burdensome for users. Sorting through resources can be challenging and requires refined search skills. If users do not evaluate their sources carefully, they might improperly rely on sources that lack credibility. The Internet connects people to experts, but it also connects them to cranks and charlatans.

The creation of online communities has made new kinds of projects possible, in which thousands of users work together toward a goal. Wikipedia is the most visible of these projects, with millions of articles written through collective efforts. While by no

means perfect, it has distinct value, and it could not have existed without the Internet's capacity to connect people.

3. The Internet enables anyone to publish content.

Internet users have pooled their efforts to create a number of indexes that list information previously recorded only in specialized reference materials. A number of these indexes exist within Wikipedia. The indexes, articles, and links within Wikipedia stand as the preeminent example of crowd-created content. Most of the contributors are not experts in a traditional sense, but the Internet in general (and Wikipedia in particular) gave them a platform to share their knowledge with others.

The downside of enabling anyone to publish content is that anyone will, regardless of that person's level of expertise or ignorance. A significant portion of Websites contain erroneous or strongly biased information, and many Webpages have been created by people without any real credibility. (Those who evaluated the Webpages listed in "Exercise: Evaluating Credibility" might have found that the person behind one of them claims to have been beamed aboard a UFO.) Web users must carefully evaluate sources.

4. The Internet drives businesses to adopt new models for making money.

In past decades, the sale of print encyclopedias was a lucrative business. Multimedia encyclopedias on CD-ROM took over the market, and not many years later, the availability of information on the Internet effectively killed the market for CD-ROM encyclopedias. Even online encyclopedias such as MSN Encarta fared poorly as the Web grew, and Microsoft announced the end of the service in 2009. The market for

information changed as the ways in which people accessed information changed. The reference business has evolved.

The widespread adoption of the Internet also created a market for subscription services like EBSCO, ProQuest, LexisNexis, and others. By reaching agreements with scholarly journals and other publications, these services positioned themselves to be the providers of high-quality information by marketing their databases to institutions. Individuals not affiliated with schools or libraries cannot afford these expensive databases, but academic researchers depend on them.

Key Terms

abstract—a brief summary of an article.

hyperlink—a word, phrase, or image that users can click to jump to another document or to another section within the document

Open Source software development—the development of software by combining the individual efforts of several different programmers, without assistance from schools, businesses, or recognized experts.

peer-reviewed journal—a scholarly journal that only prints articles that have already passed critical assessments by scholars besides the author

scholarly journal—a publication containing articles written by experts within a given field and intended for other experts

Review

1. What about Microsoft's Encarta led many consumers to choose it over Encyclopedia Britannica, even though Britannica contained higher quality information?

2. Similar to the printing press before it, what capabilities of the Internet can help to make the advance of human knowledge swifter and smoother?
3. Explain why electronic search can be extremely useful to researchers. .
4. Why does Evans believe electronic research is narrowing scholarship? Why does Tenopir disagree?
5. Explain the meaning of this sentence from the text: “Searching is a process that requires thought, time, and flexibility.”
6. An undergraduate student uses Google Scholar to help her find information about the role of women in medieval Europe. The results page gives the undergraduate a citation for an article that appeared in the *Journal of European History* in 1987. If the undergraduate wants to read the full article, how can she locate it?
7. Give one example of a source that might be appropriate for high school research, but not research in graduate school.
8. What changes have been made to Wikipedia in an effort to improve the quality of its information?
9. How has accepting contributions from thousands of volunteer editors helped Wikipedia? How has it limited Wikipedia?

Exercise: Searching for Information

Given the following situations, use the search engine of your choice to find the information needed. Use a source appropriate for the situation.

1. Your uncle has a lifelong love of sugar cookies, but he was recently diagnosed with diabetes and has to eliminate sugar from his diet. Find a quality recipe that will allow him to eat his favorite treat without endangering his health.
2. For a U.S. history class, you need to give a presentation about an American political figure. You remember hearing about a vice presidential candidate who intrigued you. The man withdrew from the race when the public learned he had suffered from depression and received electroshock therapy.
 - A) Find the name of this man.
 - B) Using that name, find a credible source confirming why he withdrew from the race.
 - C) To enhance the presentation to the class, find a political commercial for this man's running mate.

Discussion

1. Look at page 12 and examine the quoted paragraph about how errors did not disappear immediately after the invention of the printing press. How might these facts relate to the Internet?
2. The section of the chapter discussing the printing press and the Internet suggests several ways in which the Internet might change the future of research. Where do you see this potential already being fulfilled? Do you think that all the possible changes described in the chapter will eventually take place, or not?
3. Beside those discussed in the chapter, are you aware of examples of Web sources lacking credibility?

4. Do you agree with this chapter's assessment of Wikipedia's usefulness? Or do you think Wikipedia is more useful or less useful than the author of this text believes?

Walkthroughs for "Exercise: Evaluating Credibility"

"Antidepressant Medications."

<http://www.depression.com/medications.html>

This Webpage offers statistics about how many Americans suffer from depression and states that depression is treatable. It says that doctors choose treatments based on the circumstances of the depression, and that treatments take time. The Webpage highlights one particular medication, Wellbutrin XL, by urging users to click on a link and "Learn more about a treatment for depression that has made a difference in the lives of millions of people."

The sidebar (as well as the homepage) reveals that the site is funded and developed by GlaxoSmithKline. Clicking on the provided link will take the user to the company's Webpage. For a less biased explanation of GlaxoSmithKline, a user might refer to the Wikipedia entry about it. Unlike the company's Website, Wikipedia plainly states that GlaxoSmithKline is a pharmaceutical company. Later in the article, Wikipedia lists Wellbutrin as one of the drug company's products.

Knowing that a drug company is behind the information on the Website, a user might notice that the site focuses on medication as a treatment for depression. While other treatments are discussed, the sidebar menu clearly lists medication before alternatives. Furthermore, the user realizes that the Wellbutrin link is an advertisement, not objective information. Users who assume the effectiveness of Wellbutrin based on

this Webpage essentially say, “I know Wellbutrin is an effective treatment for depression because the company that makes it told me so.”

The information at Depression.com might be true, but users need to consider the perspective of its creators.

“Invention Timeline.”

http://www.renaissanceconnection.org/lesson_science_technology.html

This Webpage provides information about the development of the printing press. It features a lesson plan for teachers that includes a timeline relating to the printing press and information about the invention of other communication technologies.

Users should never assume that Websites with .org addresses are trustworthy; neither should they assume that sites intended for teachers are credible. Many organizations and companies offer lesson plans designed to teach students about issues important to them. The fact that a Webpage identifies itself as being “for teachers” does not give it any credibility.

Scrolling to the bottom of the Webpage reveals that it is connected to the Allentown Art Museum. Clicking on the “About This Site” link reveals more. The museum has a significant collection of Renaissance art, and its education department wanted to develop a resource to enhance middle school education in Pennsylvania. The creators of the Website might not be widely-recognized experts in history, but they do have a professional interest in education. Furthermore, the Website’s association with an art museum would not seem to have any bearing upon the information it presents: the Allentown Art Museum has little to gain by presenting slanted information. In the description of its mission, the museum expresses the goal of fostering literacy in the arts

and developing critical thinking skills. Nothing in the mission statement suggests a biased viewpoint. In accordance with these factors, this source should be regarded as having some credibility. For casual users or for high school students, the resource probably has enough credibility to be useful. For researchers at the collegiate level or beyond, however, the education department of a small art museum would not have enough credibility to merit citation in historical research.

Readers should note that some private museums have been created with the stated missions of promoting a particular viewpoint. These goals should be taken under consideration when evaluating such museums' information.

“Ancient Roman Military”

<http://www.crystalinks.com/romemilitary.html>

This Webpage offers relatively detailed information about the military of ancient Rome. Among other topics, it describes the history of the Roman army, battle tactics, and weaponry. The Webpage lists no author and no sources of information. Rather than connecting to a bibliography, the link “List of Wars & References” takes the user to a Wikipedia page. This suggests that the Webpage might have been pieced together from Wikipedia entries, though nowhere is this made clear.

To determine who is responsible for the information, the user must go to the Website's homepage, either by typing in www.crystalinks.com or by clicking on the “Crystalinks Main Page” link. The user quickly sees that the Website is maintained by a woman named Ellie Crystal. Clicking on the “About Ellie” link leads to a biography. This biography, as well as Crystal's YouTube video on the homepage, states that Ellie Crystal is a psychic with a deep connection to a spirit guide. Elsewhere on the site, the

user finds that a fee of \$150 would pay for a psychic reading with Ellie in person or over the phone.

The information about the Roman military could well be accurate, but users have no way of being sure. Nowhere does Crystal claim any educational background or expertise in history. Therefore, anyone choosing to use information from the page on Roman military history effectively claims, “I know this information about the army of ancient Rome is true because a psychic told me it is.”

CHAPTER THREE: SOCIAL NETWORKING

Before you start reading...

Consider these statements about social networking sites.

“Years from now, when historians reflect on the time we are currently living in, the names Biz Stone and Evan Williams will be referenced side by side with the likes of Samuel Morse, Alexander Graham Bell, Guglielmo Marconi, Philo Farnsworth, Bill Gates and Steve Jobs — because the creation of Twitter by Stone, Williams, and Jack Dorsey, is as significant and paradigm-shifting as the invention of Morse code, the telephone, radio, television or the personal computer.”—actor Ashton Kutcher

“I honestly believe it's the next step in human evolution. All life takes place on Facebook; it's the next thing, and I believe people underestimate Facebook—it really is the perfection of the social network. My wife is on it nine hours a day, and the next generation coming up is just so natural—I don't think kids care about privacy, the younger generation. Everybody wants to be famous.”—author Ben Mezrich (“The Salacious Story...”)

- How important to your life are social networking sites like Twitter and Facebook?
- Do you think social networking sites will have as much impact on the future as Kutcher and Mezrich do, or do you think of them as amusing novelties?
- How does your communication with others through social networking sites differ from your communication with others face to face? Consider what you communicate about, message length, your attitude toward others, etc.
- Mezrich believes that 21st century teens do not care about privacy and want the whole world to know them through social networking sites. Do you agree?

How it used to be...

Before Internet use spread, people could keep in touch with family and friends by visiting them in person, writing them letters, or telephoning. Long distances could make face-to-face visits impossible. Letters delivered through first-class mail usually took two or more days to be delivered to their destinations. Phone calls bridged long distances instantly, but could become very expensive since callers were charged by the minute.

Communicating with several people at the same time was difficult. Of course, advertisers could communicate with the public through expensive billboards, newspaper ads, and television and radio commercials, but an everyday person attempting to arrange, say, a family reunion might have to place dozens of phone calls or send dozens of envelopes through the postal service—both of which would consume time and money.

In contrast, with tools like Facebook and Twitter available, word of a family reunion could be spread to a hundred relatives instantaneously.

For people with Internet access, e-mail became a speedy and cost-effective way to communicate with others, including with large groups at the same time. Instant messaging and chat rooms also helped people to connect to one another. Later, the development of social networking sites aided people in communicating. A **social networking site** is a Web-based service that allows individuals to 1) construct a public or semi-public profile, 2) create a list of other users with whom they share a connection, and 3) view their own list of connections and those made by others within the site. The “backbone” of any social networking site consists of the visible profiles that display a list of friends who also use the site. This ability to publicly display a user’s network of

friends and acquaintances makes the social networking site distinct from other forms of communication (“Social Networking Sites: Definition...”)

Most commonly, people use social networking sites (SNS) to keep connected to others they met offline. A 2009 survey showed that among those who used SNS, 89 percent of adults and 91 percent of teenagers used them to stay in touch with friends (“Social Networks Grow...” 2). More than anything else, SNS support the social connections that people establish through their everyday lives at work, school, church, and so on. SNS can also connect strangers based on shared interests, political views, or activities (“Social Networking Sites: Definition...”) About half of all users make new acquaintances through SNS (“Social Networks Grow...” 2). Given the rapid growth of SNS, these figures mean that millions and millions of people use the Internet to socialize online through shared messages, photographs, videos, and links. But SNS have other applications, too. Businesses and political organizations have put them to uses beyond messaging friends.

History of Social Networking Sites

The Website Six Degrees is recognized as the first SNS. The site combined several features that were available elsewhere. Websites and instant messaging programs had long included user profiles and friend lists, and in 1998, Six Degrees added the ability to surf through others’ friend lists. Six Degrees included few other functions, though; early users complained of having little to do after “friending” others. Part of the problem might have been that few users had a large network of friends online; Internet use was not as widespread as it would be in later years. Six Degrees closed in 2000 (“Social Networking Sites: Definition...”)

Friendster experienced more success. The site's creators intended it to compete with the dating service Match.com, reasoning that if people could get to know the friends of their friends, some romantic sparks might fly. At first, Friendster grew through word of mouth. Use of the Website spread mostly among three distinct groups: bloggers, homosexual men, and attendees of the Burning Man Arts Festival. The site grew to have 300,000 users before journalists in the offline media began to report of its existence. The wider exposure brought by media coverage changed the site drastically ("Social Networking Sites: Definition...").

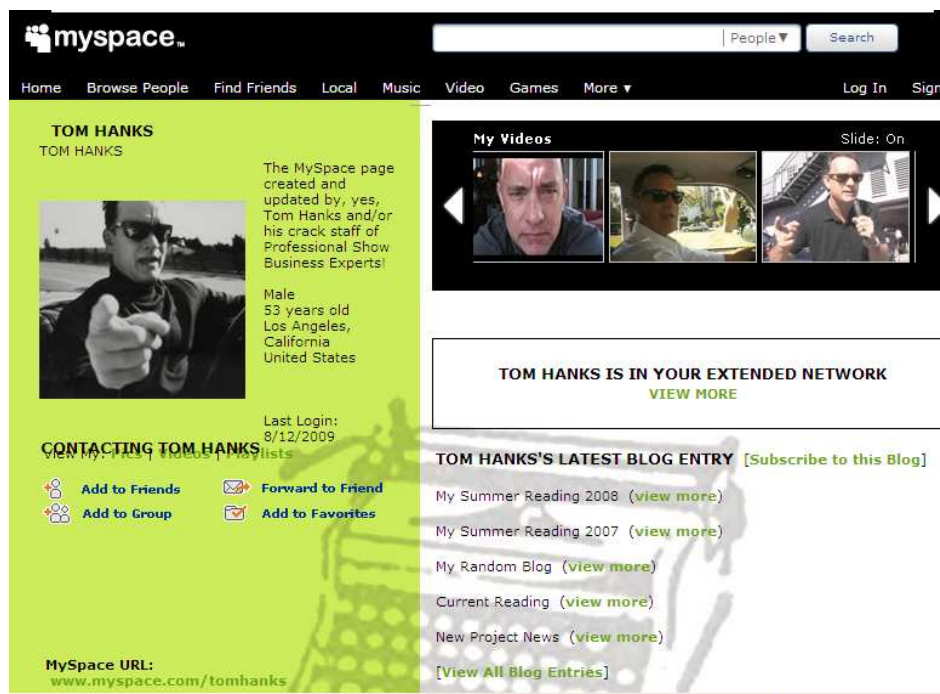
The tidal wave of new users led to changes that alienated many established users, causing Friendster to decline. After learning about the SNS through magazines or television programs, a huge number of people created accounts—far more people than Friendster's databases or servers could handle. The site regularly experienced technical difficulties that frustrated its users. As people flocked to the site, the early adopters of Friendster also became disenchanted with the social network's composition. When the site grew through word of mouth during its initial stages, the people creating profiles knew someone else already using the site. Therefore, relatively homogenous groups populated Friendster; someone using the site would be very likely to meet similarly minded people. Fans of the Burning Man Arts Festival, for instance, felt that the site was created for and populated by others like them. But after a fresh wave of people learned about the site through news stories, many of the newcomers had little in common with the groups who had used Friendster earlier. As researcher Danah Boyd explained, "the onslaught of new users who learned about the site through media coverage upset the cultural balance" ("Social Networking Sites: Definition..."). To those who adopted

Friendster before the media covered it, the Website had felt like a community; now it became filled with strangers.

The increased numbers also led to **context collapse** that troubled some of Friendster's users. Context collapse refers to the removal of barriers between previously separated aspects of a person's life. For instance, imagine a group of women having a bachelorette party when the bride-to-be's grandparents unexpectedly arrive. Depending on the activities at the party, everyone might start to feel more than a little uncomfortable. The bride-to-be might like these relatives just as much or more than the friends at her party, but that does not necessarily mean that she wants grandma and grandpa to join in the party. She wants the partygoers and her grandparents to remain separate parts of her life, in their own surroundings, or context. As SNS grow, users have similar experiences. Instead of receiving friend requests or messages only from personal friends, users begin to get contacted by people like their bosses, their teachers, elementary school bullies, etc. ("Facebook at Age Five"). This combining of different social contexts requires users to handle very different people at the same time ("Facebook's Privacy Trainwreck" 18). Balancing these different audiences can be difficult. Writing a message to a college roommate becomes more complicated if one knows that great aunt Mildred might read it, too. In response to such context collapse, users often begin to withhold information from their profiles to guard it from unwanted readers. Context collapse can also cause users to spend less time on the SNS or seek out a different SNS that fewer people use. This phenomenon contributed to Friendster's decline ("Social Networking Sites: Definition...").

Friendster's fall left an opening for another SNS, and MySpace capitalized on the opportunity by catering to dissatisfied Friendster users. The administrators of Friendster had actively deleted "Fakesters," profiles of users that included inaccurate information about an individual. This policy targeted more than just imposter celebrity profiles. For instance, a profile for "Brown University" would be deleted because it did not represent an individual person, even though such a profile could help Brown alumni to network. A non-realistic profile photograph, such as an image of a cartoon character, would also get booted from the site. In particular, a number of indie rock bands were expelled for failure to abide by Friendster's profile policies. MySpace, on the other hand, welcomed the bands, even contacting some local musicians to see how the Website could provide further support. While not specifically designed for musical artists, MySpace undoubtedly benefitted from the band-fan connections cultivated on the site. Furthermore, MySpace proved more responsive to users' desires, regularly adding features based upon the interests of its members. It also allowed users to personalize their profiles with backgrounds, layouts, and other features. MySpace grew far larger than Friendster ever did, in part by drawing in users that had rejected the earlier site. In 2004, teenagers began to flock to MySpace ("Social Networking Sites: Definition...").

Figure 3.1—Tom Hanks' MySpace page



In addition to biographical information and a list of friends, actor Tom Hanks displays videos of his electric car on his MySpace page.

That year also marked the origin of the SNS that came to dominate the market: Facebook. Created by students at Harvard University, Facebook at first required a college-provided e-mail as part of its registration process. This kept the Facebook community small and gave users a feeling of intimacy (“Social Networking Sites: Definition...”). Later, the site became open to high school students, then to professionals in corporate networks, and then to everyone. This expansion of eligibility helped the site to grow, as did its willingness to let outside developers create a huge range of applications for the site (Glaser). In September of 2006, 8.9 million people utilized Facebook, a number that grew to 37 million by August of 2007 (Glaser). The site’s rise became a boom in 2009: Facebook had 150 million users in January of that year and

ballooned to 250 million users before July ended. If Facebook was a country, it would have been the fourth-largest nation in the world (“Facebook at Age Five”).

By mid-2009, Facebook seemed to have defeated MySpace in the battle for social networking dominance. While Facebook grew, MySpace cut almost 500 employees from its payroll, about 30 percent of its workforce. And compared to the year before, MySpace had 5 percent fewer visits in May 2009 (“Facebook at Age Five”). After describing how he had closed down his old MySpace and Friendster accounts, *Newsweek* writer Kurt Soller opined, “...my generation had decided, almost for me, that Facebook was the only social network that mattered, so why bother with anything else?” (“Facebook at Age Five”).

While Facebook might still have to deal with problems like context collapse within its network, now larger than 300 million, the company’s future seems more secure as of this writing than it had just a year earlier. In fall 2009, Facebook answered some questions about profitability that had plagued it (Oreskovic). Profits had eluded the SNS, even though it had established a dominant position on the Web. Facebook had trouble generating significant advertising revenue because members resisted **user-targeted advertising** that could be especially lucrative for the site. User-targeted advertising differs from traditional advertising such as billboards or television commercials because of its increased focus on specific consumers. Instead of advertising a product or service to the random people who happen to spot it, ads appear in response to a user’s online activities and interests. Google has incorporated user-targeted advertising successfully, but many Facebook users have resented targeted ads as an invasion of their privacy (“Facebook at Age Five”). Despite difficulties in incorporating advertising, Facebook

announced in September 2009 that it had finally begun to bring in enough cash to pay for its operating costs, which analysts considered an encouraging sign for the company's long-term future (Oreskovic). Nonetheless, Facebook has further to go before it silences all those who doubt its ability to bring in the massive profits expected of it.

The future of Twitter is even less clear, but it continues to grow. Inspired by the dispatch systems that package couriers and emergency services utilize, Twitter remained limited until text messaging boomed in 2005-2006. With more cell phone owners messaging one another, Twitter's mobile status updates could take off (Sarno). Between 2008 and 2009, Twitter usage exploded, with the number of people on the site growing from 2 million to 32 million (McIntyre). The number of users rose to an impressive 75 million by January 2010 (Gaudin). The growing user population has been responsible for a number of the site's innovations: for example, users developed the practices of directing tweets at one another using the "@" symbol and marking topics using the "#" symbol. While the company itself has made few changes to Twitter over the past couple years, the users have greatly expanded the service's functionality (Johnson). Writer Steven Johnson likened Twitter's evolution to "inventing a toaster oven and then looking around a year later and seeing that your customers have...figured out a way to turn it into a microwave." Twitter seems poised to become a dominating presence, but it must face daunting problems.

Twitter has yet to announce profits, though it has recently found substantial revenue sources. In its earliest years, Twitter followed a policy of valuing growth over income, focusing on the attraction of more users and ignoring questions about profitability. Investors and analysts wondered if the company would ever make money.

But doubt regarding the site's ability to bring in cash lessened in October 2009, when the company announced multi-year deals with both Google and Microsoft. In return for making users' tweets available to the Google and Bing search engines, Twitter received about \$15 million from Google and about \$10 million from Microsoft (Ante). In March 2010, Twitter announced that it had reached deals to open up its data stream for seven smaller companies, charging them fees that varied according to the size of the company (Johansmeyer). All of these deals prove that Twitter's data is valuable to others, whether they desire to study it themselves or enable clients to search through it. But with annual operating costs of \$20-25 million, Twitter needs to find revenue streams beyond these deals. Starting in 2009, the company began discussing how to create an advertising platform for Twitter. Their goal: to implement advertising in a way that is "organic and in the flow of the way people already use Twitter," rather than just tacking ads onto the Website (Ante).

In April 2010, the company announced its long-awaited plan for user-targeted advertising: Promoted Tweets. These messages, paid for by companies, will appear within users' content streams. When users search for specific keywords, the promoted posts will appear—regardless of how old they are. Formerly, a company's tweets were likely to become buried underneath more recent messages, but the paid tweets will be given preferential placement. They will appear similar to regular tweets until a user's cursor scrolls over them, when they will turn yellow; a message in small type will also indicate that the tweet is sponsored. This system could prove lucrative for Twitter, but users might resent the appearance of ads in their personal data streams ("Twitter

Unveils...”). The ads could prompt backlash. Until the company successfully establishes an advertising model, questions about its long-term viability will remain.

Twitter faces another problem perhaps even more troubling than its need for revenue: the site’s user retention rate lags far behind that enjoyed by Facebook. Millions of people may sign up for a Twitter account, but six out of ten stop using the site after a month, according to an April 2009 Nielsen survey (Hoffman). The site officially has 75 million users, and its growth means that there are more Twitterers than ever before. But many of those users have inactive accounts. In December 2009, only 17 percent of users sent even a single tweet. Compounding the problem, the pace of the site’s growth has slowed significantly. New users are still signing up, but not at the same rate as in the past (Gaudin). Unless Twitter can get users to keep coming back to the site, its future growth will be limited (Hoffman).

Controversy over SNS

Of course, the history of social networking sites includes more than just numbers and a list of sites: the debate over such online communication tools has been fierce. Especially in the earlier years, much of the traditional media coverage of online communication focused on the potential for manipulation and deception (Parks). The Internet was portrayed as a wild place where no one could be sure of whom to trust. Both everyday observers and researchers have also questioned whether the Internet will enrich or impoverish human communication. “...The Internet is stimulating connections and forging new links at all levels of organization—grassroots, corporate, institutional, national, [and] global,” wrote one researcher, “and [created a] concern that such connectivity may detract from local interaction” (Haythornthwaite 125). In other words,

will frequent use of online communication keep users from interacting with the people who actually live in their communities? Observers have posed other questions as well. Are SNS safe? Are users of the sites destroying the principles of privacy? Do SNS have serious uses, or do they just provide distractions from more important matters? These are only a few of the questions SNS have prompted.

This chapter will examine several of the debates and concerns over sites like MySpace, Facebook, and Twitter, beginning with parental worries that the sites expose youth to inappropriate content.

Inappropriate Material and Social Networking Sites

As online social networking grew in popularity, parents expressed concern over what content SNS would expose their children to. Users on sites like MySpace and Facebook sometimes use crude slang, post sexually suggestive photos, and make references to drinking, drugs, and casual sex (Wilde).

Of course, not all SNS users will be exposed to such material. Users determine which individuals belong to their friend network, thereby determining their own experiences on the SNS. For instance, a teen who fills his personal network with youth ministers, missionaries, and fellow churchgoers has created a religiously supportive network. While the SNS as a whole contains questionable content, that does not mean that teens see that content whenever they log in (“Friends, friendsters...”).

SNS themselves have policies and procedures in place designed to prevent inappropriate content from spreading through their sites. On the most basic level, users themselves patrol the sites. Both Facebook and MySpace include features enabling users to report abusive or inappropriate content. The companies managing the sites also devote

part of their workforce to policing content. In a 2009 article, a representative of MySpace stated that “MySpace dedicates a third of our workforce to monitoring our site on a 24-hour, seven-day-a-week basis” (Wilde). Out of Facebook’s 850 employees, 150 spend their days investigating questionable content on the site. This “User Operations” division seeks to enforce bans on harassment, nudity, drugs, pornography, and fake profiles; unlike MySpace, however, Facebook only reviews content reported by users and does not begin investigations on its own. Both sites must attempt to maintain a balance. If they censor users’ material too extensively, the users could become angry. On the other hand, content that draws bad publicity could make companies reluctant to advertise on the SNS (Summers).

Despite these efforts, material that parents could find objectionable exists on SNS. Parents, teachers, and students should be aware of the possibility that they could access offensive material on these sites.

Friendships on Social Networking Sites: Meaningful or Meaningless?

The controversy over online friendships stretches beyond Facebook and MySpace. To understand the issues of friendships on SNS, one must consider not only the practices of SNS users, but the fundamentals of Internet communication. For as long as people have communicated with one another online, researchers and the public have debated the value of that communication. In particular, proponents and detractors of online communication have analyzed how the absence of face-to-face contact influences communication. In 1996, before the founding of any SNS, one article described the controversy as follows:

On one side are those who view on-line relationships as shallow, impersonal, and often hostile. They assert that only the illusion of community can be created in cyberspace. On the other side are those who argue that computer-mediated communication liberates interpersonal relations from the confines of physical locality and thus creates opportunities for new, but genuine, personal relationships and communities. (Parks)

Research yielded some support for both views. Does the Internet defy physical distance to bring people together in a worthwhile way? Or does the Internet offer nothing but fake relationships that distract people from forming more valuable connections offline?

Early research revealed that communicating online through text (as many SNS users do) has both potential advantages and disadvantages when compared to face-to-face communication. Because online communication can be achieved from anywhere on the globe, it presents more opportunities for social relationships. A resident of a small town who loves movies filmed by an obscure Australian director may not have neighbors who share her interest, but she can probably find dozens of other fans online. The social capabilities of the Internet can be especially valuable for individuals who live in relatively isolated areas. Furthermore, the lack of face-to-face contact can actually help some individuals to establish meaningful relationships. On the Internet, some people feel less apprehension about being judged than they would if meeting someone face to face; a number of participants in controlled experiments reported that computer-mediated communication helped them to overcome shyness (Parks).

On the other hand, most computer-mediated communication lacks some of the cues available during face-to-face dialogue, and the absence of these cues can have negative effects. Without facial expressions, bodily movement, vocal tone or volume, or a shared location, interpreting the meaning of someone's words can be difficult. Beside hindering comprehension, the separation from the other person might cause an individual to communicate differently. In several experiments comparing computer-mediated groups to groups that met in person, the computer-mediated groups engaged in more verbal aggression, disclosed information more bluntly, and had more difficulty moving to a shared view. The anonymity of online communication may have been a factor (Parks). Simply put, it is easier to be mean to someone who remains unknown and unseen. It is possible, though, that studies overstated the detrimental effects of communicating without face-to-face cues. The time restrictions on laboratory experiments could have skewed results. Research has suggested that people will compensate for absent visual and auditory cues by adapting textual cues to meet their needs. Given time for the interaction to develop, messages will contain a "greater proportion of socioemotional content" (Parks). Eventually, users find ways to express emotions through text.

All of this suggests that using SNS as an alternative to face-to-face communication may be helpful for physically isolated or socially anxious individuals, but also suggests that a lack of face-to-face contact could lead to more misunderstandings or increased anti-social behaviors. Relationships that evolve through a series of communications over time may compensate for the absence of vocal, facial, and bodily cues, but many of the brief and fitful interactions on SNS do not fit this mold. In fact, some observers fear that the popularity of SNS and text messages are undermining the

ability of teenagers to read body language in face-to-face encounters (Bauerline).

However, most SNS contact comes between people who already know one another.

Previous offline interaction can therefore provide background information about personality and manner. With SNS communication between individuals who know one another elsewhere, the prior relationship will help users to understand the emotional content of messages (Kavanaugh).

SNS users who seek to network with people not known to them offline should be especially mindful of the limitations of textual communication. Without the hints provided by vocal tones and facial expressions, a message may have one meaning to the sender but a very different meaning to the recipient.

For example...

Imagine that you are working on a group project with someone whom you only met through a class and to whom you have never spoken in person. The person sends you this message through Facebook:

Can't use your idea. Talked about it, and we all decided it won't work. We're going to use Tom's instead. Sorry.

- On a scale of 1-5, with 1 being "completely insincere" and 5 being "completely genuine," how sorry do you think the sender really feels? Explain what about the message leads you to feel that way.
- On a scale of 1-5, with 1 being "not at all" and 5 being "extremely," how frustrated do you think the sender felt when sending the message? Again, explain what about the message causes you to feel as you do.

Once you are finished, compare your answers to those of others.

In addition to critiquing the Internet as a mode of communication, some people have questioned whether this online communication does more to aid or destroy friendships. Some commentators have expressed a belief that online relationships lack depth and pull people away from "the real world" and the actual relationships possible

offline (Parks). This simple division between the Web and the real world might not actually describe complex social practices, however.

For one matter, not all relationships are equal. Some relationships can be described as having weak ties: the people know one another as acquaintances or casual contacts, exchange information infrequently, and share few types of information or support. Relationships with strong ties, in comparison, feature people closer to one another who exchange information frequently and are more likely to disclose personal information (Haythornthwaite 128). According to research by Carol Haythornthwaite, the availability of a new medium like the social networking site is unlikely to affect a relationship held by a strong tie. The individuals will use the medium if it proves helpful in connecting to one another, or they will ignore the medium if it does not prove useful. Because the strong tie motivates the people to connect to one another, they are likely to remain close no matter what media they use to communicate (e-mail, telephone, letters, face-to-face meetings, etc.) (Haythornthwaite 138). In contrast, weak ties can be either strengthened or weakened by the introduction of a new medium. Because people with weak ties communicate infrequently, a new medium that changes communication patterns could dissolve the tie (Haythornthwaite 137-138). Suppose someone sits on his porch and occasionally chats with a neighbor who walks her dog past the house—a weak tie. If the man begins to sit on the porch less because he spends time Facebooking instead, the weak tie could dissolve. In such ways, a new medium can disrupt weak ties.

On the other hand, a new medium like a SNS can create new ties or strengthen old ones. The Internet and SNS have significant capability to create networks of weak ties, bringing people into contact who otherwise would never have become connected

(Haythornthwaite 139-140). By providing additional avenues for communication, and perhaps enabling people to communicate privately, SNS could help to make communication more frequent and increase intimacy, strengthening ties that already existed (Haythornthwaite 139).

However, most of the studies completed about Internet communication have focused on e-mail or other interactive programs, not the more recent phenomenon of the SNS. SNS may do less to establish ties between people. E-mail or chat programs involve individuals on both ends contributing to a dialogue. This differs from MySpace, Facebook, or Twitter, on which a user can receive information about someone without any reciprocity in the relationship. With these and other SNS, a user might feel a false sense of intimacy with a person; reading status updates is not the same as knowing a person and engaging in conversation. For example, a Facebook user might follow the activities of his romantic crush in great detail and feel like he knows her, but that does not mean the crush knows of the other person's existence. If people deceive themselves into viewing a relationship as important when it is really one-sided, the results could be emotionally devastating ("Facebook's Privacy Trainwreck" 17-18).

Such examples illustrate the difficulties of using the term "friend" to describe online relationships. Critics of the Internet and SNS have charged that online friendships are not real. From its early years, the Internet has been blamed for "disconnecting people from local, family interaction, [instead] drawing them into online relationships with people of unknown and unconfirmed identity" (Haythornthwaite 126). Tales of users with hundreds of MySpace or Facebook "friends" seem to confirm perceptions about the falsity or shallowness of online friends, but in truth, a "friend" on a SNS may belong to

any of a number of different categories of social relations. Teenagers commonly type their friends by using terms like “friends,” “best friends,” and “bestest friends” (“None of this is Real” 18). Just as in real life, “friends” on SNS belong to hierarchies. While a user’s friend network quite likely includes close friends, the network could also function as a sort of electronic address book, including acquaintances to whom the user rarely speaks (“Facebook’s Privacy Trainwreck” 17). The network might also include friends with whom the user desires no contact, but whose requests the user felt awkward about rejecting (“None of this is Real” 19). For these reasons, a friend in a social network should not be assumed to be a friend in real life, and users themselves frequently draw this distinction. Teens interviewed for Sonia Livingstone’s SNS study, for instance, expressed frustration with privacy settings that do not allow them to differentiate between close friends and others (405).

Concerns that SNS harm offline relationships will not disappear, and only time will reveal the sites’ full effects. However, the stereotype—teens withdrawing from local relationships in favor of shallow, anonymous SNS relationships—obscures a more complex picture. As the Internet becomes more embedded in everyday life, and people use SNS to facilitate phone and face-to-face meetings, the simple contrast of offline vs. online friendships does not quite fit (Livingstone 395-396). For one thing, an online “friend” can belong to a number of relationship categories, and observers should not make the error of assuming that users perceive SNS friends as close to them (“Friends, friendsters...”) Also, while SNS may have global capabilities, most SNS contacts are local and based upon ties established through study or work (Livingstone 393). SNS can help distant friends to keep in touch, or can aid users in maintaining a potentially useful

list of contacts. On the other hand, the brief messages exchanged on SNS should not be confused as a substitute for face-to-face communication, and the information gleaned through SNS also has the potential to feed a false feeling of intimacy. Ultimately, though, it is the user who determines what role SNS play in relationships.

Got Time?

- Take a look at your own friend list(s) on the social networking site(s) you use. How many of the people on it would you call close friends? How many are casual acquaintances? Strangers?
- How often do you use the SNS to exchange messages with others? Which others?
- Do you use the SNS to set up phone conversations and face-to-face meetings, or does the SNS take the place of these other methods of communicating?

Safety and Social Networking Sites

CBS News included this quote from a parent near the end of a 2006 article about MySpace: “Please don’t allow your children to go onto MySpace...It’s a very unsafe environment for them to be in.” The parent, Susie Granger, gave her warning after her teenage daughter was sexually assaulted (Kreiser).

Social networking sites received a great deal of media attention for being linked to assaults on teenagers and disappearances. Sexual predators are known to have used SNS to gather personal information about targets and to contact them, sometimes sending graphic messages to teens (Kreiser). Word of such incidents spread rapidly and have been covered through thousands of newspaper articles and television stories. To a number of parents, social networking sites represent a danger that must be stopped, lest

children fall prey to predatory adults. After Susie Granger's cautionary statement, the CBS news article ended with these ominous words: "...for the thousands of teens who are hooked on [MySpace], it's a warning that's lost in cyberspace" (Kreiser).

Other observers believe that the media have overstated the dangers of SNS.

Researcher Danah Boyd holds this view:

Remember: Most of what you are hearing in the press turns out not to be associated with MySpace at all. Just because teens do something stupid/bad and they have a MySpace account does not mean that they did it because of MySpace.

Teens are more likely to be abducted at school than on MySpace. Teens are more likely to die in their parents' cars than be killed because of MySpace. (Glaser)

Undeniably, teens have come to harm because of MySpace, and every expert agrees that people need to exercise care in deciding what personal information they should post online. But are SNS as dangerous for teens as the CBS article indicates?

Observers like Larry Magid, author of *MySpace Unraveled*, believe teens to be ignorant of the risks they take. "Kids are in denial because the name is MySpace," he says. "There is a sense of intimacy for them...there is a sense of anonymity" (Wilde). Magid describes teens as "showing off" by giving personal information to the world (Wilde). Other observers believe that SNS users do more than just unthinkingly post information that would have been private in an earlier era. Instead, youth are holding back details to "avoid giving compromising information to people at school or in their local area who might be hostile or dangerous to them," writes researcher Nick Couldry

(382). After interviewing several teens about their social networking practices, Sonia Livingstone concluded, “Deciding what not to say about oneself online is, for many teenagers, an...act to protect their identity and their spaces of intimacy” (409). She sees teens as making conscious decisions about what and what not to share. The teens in her study wished that SNS would provide more and simpler options to control who has access to their information (405). These studies show that at least some teens give safety due consideration when using SNS.

Lots of teens allow only users on their friends list to view profile information, but even that might not provide adequate protection. In 2006, NBC’s *Dateline* aired a program about a detective who investigated teen privacy on SNS. He created a MySpace profile for a fictitious teen named Matt, a 19-year-old who liked baseball, playing pool, and listening to his iPod. The detective posted an image of a cartoon character for “Matt’s” profile picture. Within two weeks, 100 teens had friended “Matt” and allowed him to access their profiles, and one girl expressed a desire to meet him (Stafford). Someone with malicious intentions could gather teens’ personal information in exactly the same way.

Anyone who uses SNS, whether teenagers or adults, should be cautious about what details about themselves they post online. Furthermore, users should be careful about which SNS members they allow into their personal networks. Giving information to people they do not know well could have unintended consequences for users.

Social Networking Sites and Identity: Benefits for Teens

Despite the risks, a number of researchers have found positive results from SNS use, including the development of a teen's sense of self and an opportunity for creative self-expression (Wilde).

The psychologist Erik Erikson considered development of a self-identity to be the main task of adolescence. Teens feel a need to know who they are and how they fit into the rest of society. They must take what they have learned about life and themselves and mold this information into an identity that others will value (Boeree). In creating their identities, teens must balance their own inner needs with the expectations of their societies. They need to determine whom to trust, what to reveal about themselves, how to establish reciprocity in a relationship, when to express emotion, and more (Livingstone 397). SNS can act as a tool in resolving these questions and help teens to create their identities.

Teens often use SNS to experiment with their self-image by creating and constantly updating profiles (Wilde). An update to a profile might be more than just a cosmetic alteration: the update might reflect a change in the way the teen sees him or herself. Just as they do when choosing what clothes to wear, what music to listen to, and what to put on their walls, teens can show who they are through their profiles. Through SNS, they present themselves to the world, and they can revise their profile to fit their tastes and views as they change. According to researcher Sonia Livingstone, the Internet presents an opportunity to "construct, experiment with and present a...project of the self in a social context" (396). In other words, teens can create, change and present their profiles for their network of friends and make changes based upon the reactions of the

network. If a teen posts a link to the Webpage of his favorite soccer player, and his friends tell him how cool the link is, then the teen knows that his community of friends values soccer. Such practices help teens to refine their personalities and behaviors.

Especially as they grow older, teens may value the display of their social networks more than their personal profile information. The position in the social network became more significant than the personal information provided. For these teens, the profile acts as a “place-marker rather than a self-portrait” (Livingstone 399). Livingstone interviewed multiple youths who described a change in their profiles as they matured. When they were younger and first experimenting with SNS, the teens drew attention to themselves with elaborate profiles displaying several elements (applications, backgrounds, etc.) that they continually changed as their tastes changed. Later, the teens removed many of these elements, instead displaying features that highlighted their contacts. Some switched from a glitzy MySpace page to a sparse Facebook page (401). Photographs of friends and links to their profiles became more noticeable. According to Livingstone, this development showed the teens defining themselves through their social relationships. Rather than showing who they were through “stuff,” they displayed their identities by showing the people to whom they were connected (402). The teens had found a place in society and wanted to display it through their SNS of choice.

The use of SNS to construct identity is not without risks. The teens’ profile pages can receive emotionally harmful negative responses. In presenting themselves to the world through SNS, teens can be exposed to critical or abusive comments. And teens could find their standing in the peer network at risk if friend requests are ignored or comments are not returned (Livingstone 403). The need the teen feels to maintain

connections through the SNS could lead to near-obsessive use of the site. Additionally, some observers have criticized SNS for contributing to teens' self absorption. These observers feel that teens (and adults) publicize details about themselves as part of a quest to gain an audience. In one man's blunt words, "It's called narcissism...Why is your life so frickin' important and entertaining that we need to know?" (Bernstein). Researchers at the University of Georgia have found that people with narcissistic personalities tend to have larger networks of connections on SNS. They have hypothesized that the high prevalence of narcissists on SNS may lead users to perceive self-interested promotion as normal on the sites (Buffardi 1311). If the researchers are right, then seeing how others show themselves off on SNS could lead even more users, teens among them, to self-centeredly put themselves on display. Livingstone, though, argues that teens' use of SNS involves less narcissistic self-absorption than appearances suggest. To her, SNS are really about identity within the peer group (400).

Teens must exercise caution when using SNS, but such sites have the potential to be of significant use as adolescents go through the process of self-discovery.

Writing

Look at your own profile page. What does your SNS profile say about you? Consider your pictures, messages from friends, groups, links, and any other information that happens to be on display at the moment.

Social Networking Sites and Privacy

When contemplating SNS, the letters “TMI” come to mind for a lot of people. Numerous media accounts have criticized SNS and their users for including too much information about personal matters. Millions of people have embraced SNS, but scholars and the general public alike have charged SNS and other communication technologies with eroding the distinction between public information and private information (Lange, P.). Because of the high percentage of young people who use SNS, teenage use of SNS has especially come under scrutiny.

Critics point to the details teens post online as evidence that today’s youth care nothing for privacy (Wilde). To such detractors, SNS seem to have ushered in a strange new world in which the most intimate details, formerly held tightly, are now freely publicized for the world to see. They perceive with anxiety a generation whose narcissistic self-display has overpowered any sense of privacy (Livingstone 393). An editorial in *The Financial Times* typifies this negative view:

...it seems that large numbers of people are discovering the joys of living their life in public, ready to sound off about what they are doing or thinking, or to share their friends with the promiscuity of a teenager. (“A transparent life”)

Those who view SNS this way greet the phenomenon with more than distaste; they fear what the future will bring. The *Financial Times* editorial continues:

...it won’t be easy to opt out of the transparent digital community that is taking shape. Social pressure to conform is powerful, and setting limits is hard. Next time a vague

acquaintance asks to be your friend on Facebook, can you really say no? (“A transparent life”)

The editorial suggests that Facebook, Twitter, and other social media represent only the tip of the iceberg. In the future, such critics believe, privacy will cease to exist: the details of everyone’s life will be fully available online, thanks to a generation that valued the quest for an audience over its privacy.

Public Information: Are You With Zuckerberg?

Those fearful of the future of privacy have pointed to comments by Facebook CEO Mark Zuckerberg as evidence that SNS have eroded privacy. Zuckerberg, in contrast, believes that Facebook is merely responding to users’ expectations. In a January 2010 interview, Zuckerberg explained Facebook’s belief that the social norms regarding privacy had changed:

People have really gotten comfortable not only sharing more information and different kinds, but more openly and with more people. That social norm is just something that has evolved over time. We view it as our role in the system to constantly be innovating and be updating what our system is to reflect what the current social norms are. (Paul)

Zuckerberg went on to relate Facebook’s recent policy changes to these remarks. The SNS made key user information public by default; those wishing to keep information more private had to change their options (Paul).

A number of observers disagreed with Zuckerberg's statements, arguing that Facebook was pushing users to give up privacy that they wanted to keep. Facebook has sparked concerns over privacy with several features in the past, leading critics to doubt that Facebook was as in tune with its users' desires as Zuckerberg claimed (Paul). According to these critics, users should have to select what data Facebook shares. The default, they argue, should be in favor of privacy.

According to Zuckerberg, Facebook is just giving users what they want—information to be shared with the public unless the user states otherwise.

Do you agree with Zuckerberg, or with his critics?

Whether these statements accurately assess SNS users' feelings toward privacy is open to debate. Data regarding teenage use of Twitter seems to contradict the notion that teens self-centeredly seek to broadcast themselves. Research published early in 2010 revealed that among online teens, only eight percent use Twitter. For a generation that uses technology so frequently, that number is staggeringly low. Experts reviewing this and other research believe that teens are interested in communicating with friends, as on Facebook, but less interested in communicating with the world at large, as on Twitter (St. George). Researcher Danah Boyd explains that most teens "are not interested in being truly public." While it offers some control, Twitter is "fundamentally a public system," she says, and teens question whether Twitter is the best tool for the kind of communication they want (St. George). For users interested in communicating with a selected group of people, Facebook offers more control than Twitter.

For adults who perceive teens as constantly seeking the spotlight that SNS offer, the lack of teens on Twitter might come as a surprise. But researchers have noticed that teens are increasingly wary of sharing too much information online (St. George). Studies have revealed that users are concerned with privacy, but in a different way than others conceive of the term. Instead of thinking about privacy as whether certain information is disclosed or withheld, the users seem more interested in having control over who knows what about them (Livingstone 404). For instance, some teens who have bitter fights with parents might be willing to discuss the argument online, but might want to make details available only to close friends, not to everyone in the social network

However, the limitations of various SNS may keep users from customizing their privacy settings to the extent they would like. People who use YouTube to post video messages for friends and family sometimes mark them as open to all users instead of limiting access to the friends in their networks. Interviewees in a study on YouTube indicated that while they were targeting particular people, they found the more private option inconvenient because their friends and family would need a YouTube account to see the videos. Rather than force members of their intended audience to sign up for accounts, some users described their videos in such a way that the general public would be unlikely to find them through a search (Lange, P.). Interviewees in another study wished that sites like MySpace and Facebook would let them create hierarchies of friends, thereby giving them more freedom to choose who has access to their information (Livingstone 405). For some users, privacy options can also prove confusing. If the privacy menu does not seem user-friendly, the user will often just ignore the privacy settings (Livingstone 406). Rather than indifference, the responses of these interviewees

reveal a concern with privacy and frustration with the limited privacy options available to them.

These user concerns suggest that privacy may be more important to SNS members than others think. Nonetheless, a large percentage of people still make the details of their lives available through SNS, and not all of them are teens. Over one-third of adults make their SNS profiles publicly available with no viewing restrictions (“Social Networks Grow”). Even those who restrict access to their information may let strangers into their networks. A British insurance agency wanted to test the ease with which someone could get access to personal information on Facebook and Twitter. The agency sent 100 Facebook friend requests and 100 Twitter follow requests to random strangers. Without any knowledge of the person sending the request, 13 percent of the Facebook users and 92 percent of the Twitter users accepted (Goldsmith). No one can be sure what this means for the future of privacy in society, but even the strongest proponents of SNS need to be cautious. Adults and teens alike need to be careful about what they post on SNS because of the potential consequences.

Maintaining privacy online means more than just omitting phone numbers and addresses from profiles. With SNS more popular than ever, the potential for unintended visitors to read information has increased, and there are hundreds of stories describing what can happen when users publicize the wrong things online. Swimmers at Louisiana State criticized their coaches on Facebook; they were kicked off the team. A student made hostile remarks about college officials on his SNS blog; the college denied him admission. An intern at a company stated on Facebook that he got paid for messing around on instant messenger; the CEO saw the Facebook page and fired him (Verardi).

In one especially high-profile case, the new head of the United Kingdom's MI-6 (the British equivalent of the CIA) had photographs and information about his family on his wife's public Facebook page, searchable using Google. The page also described the location of his London apartment. Such a Facebook profile may be harmless for some people, but for the head of MI-6, it was a serious breach of security (Jones and Norton-Taylor).

Advice from a College Counselor

“In terms of college admission, I talk with the students about the importance of projecting a professional impression through voice mail messages, e-mail account titles, and MySpace postings. I tell them a story once told to me by an admission counselor who said a student gave her e-mail address as partygirl@hotmail.com. She didn't get accepted to that college.”

--Margi Wieber
College Counselor at Providence Academy (MN)

from "MySpace in College Admission" by Nicole Verardi.

<http://www.nacacnet.org/PublicationsResources/steps/Articles/Pages/MySpace.aspx>

Even offering details about vacation have proven harmful for some people. The insurance agency Legal & General has warned the public that criminals have been using Facebook and Twitter to find targets. Using the sites, thieves can tell when people will be out of town on vacation, leaving their homes vulnerable. They can even plan the robbery by viewing photos that show the layout of the home and reading descriptions of the valuables the owners have acquired, like television sets and jewelry (Goldsmith).

SNS users must remember that the information they post could be accessed by a wider audience than intended. Users should take care when determining what details to

make public, and they should also exercise caution when determining who to admit to their friend network.

KEEPING YOURSELF IN THE CLEAR

Be aware that people seeking information about you might use a social networking site to get it. Messages and photographs that make you appear immature or unprofessional could keep you from getting into a college or getting a job. A 2005 survey revealed that 75 percent of job recruiters use Web research as part of the applicant screening process (Verardi). You don't want a stupid photo taken years ago to keep you from employment.

With some forethought, it's easy to be safe using a social network site. When managing and creating information on social networking sites, think of the following.

- **Who will read this?** Everyone in your friend network can access the information, and quite often, the information won't stop there. Never assume that your information will stay private. Ultimately, the answer to this question could be "everyone."
- **Would I want *them* to see this?** If your grandparents, your boss, your principal, your professor, or your pastor found your page on a social networking site, would you be embarrassed or get in trouble? If the answer is "yes," never put that information or image online. Information gets around.
- **How well do I know the people in my network?** Think twice before giving strangers or people you barely know the details of your life. Accepting a friend request from a person you don't know could be a bad idea.

Cyberbullying

Parents and teachers across the country have become concerned with a particular type of invasion of privacy: **cyberbullying**. Cyberbullying refers to online harassment that is repeated over time and involves an imbalance of power between the perpetrator and the victim (“Cyberbullying...” 8). The perpetrators use tools like instant messenger, blogs, e-mail, or SNS to intimidate or embarrass the target, and the victims feel helpless to defend themselves. With 93 percent of teens going online, significant potential exists for online bullying (“Cyberbullying...” 3). Bullies still level the majority of physical and verbal intimidation at their targets in face-to-face encounters, but cyberbullying has its own set of complications, and it is a growing problem. Between 2000 and 2005, the number of teens facing harassment online grew 50 percent (David-Ferdon S2).

The death of Megan Meier raised Americans’ awareness of cyberbullying. A 13-year-old with a history of depression, Megan developed a romance on MySpace with a boy named Josh Evans, a home-schooled 16-year-old. The relationship turned sour, though. Megan received a message from Josh saying, “I don’t know if I want to be friends with you any longer because I hear you’re not nice to your friends.” Later, Josh posted electronic bulletins calling Megan fat and using other derogatory terms (“Parents: Cyber Bullying...”) Finally, Megan received an e-mail from Josh saying, “The world would be a better place without you.” She hanged herself in her closet that afternoon (Steinhauer).

But “Josh Evans” was not a real person; his fake MySpace profile had been set up specifically to harass Megan. The real people behind the Josh Evans profile, and the cruel messages, were a 47-year-old-woman named Lori Drew, Drew’s teenage daughter,

and a family friend and employee of Drew's named Ashley Grills (Steinhauer). For her role in creating the fake account, Drew was convicted of computer fraud, but the guilty verdict was later overturned (Cathcart). Megan's parents have asked supporters to write to the judge to express disagreement with his decision to overturn the guilty verdict (The Megan Meier Foundation).

Want to know more?

A wealth of information about Megan Meier exists online, and there may have been further developments in the legal case since this text was written. Searches of news sites or the whole Web should result in news articles about the incident and trials. More information is available from The Megan Meier Foundation (www.meganmeierfoundation.org), an organization founded to combat bullying and cyberbullying.

For information about another high-profile case of cyberbullying, research the story of Ryan Patrick Halligan.

While most cyberbullying cases do not end as tragically as Megan's, the unique characteristics of online bullying can make it particularly troubling. Cyberbullying differs from traditional bullying because the content is persistent, the content can be spread more quickly, the bullies may feel less inhibited, and the harassment may be more invasive ("Cyberbullying..." 9). If a traditional, offline bully insults a victim face-to-face or in a note, the words either disappear as soon as they are spoken, or the note can be destroyed. But since online content can remain posted on the Web, the victim may face the message repeatedly, and others could continue to read it (David-Ferdon S3). Word of

the traditional bully's insult can spread fairly quickly through word of mouth, but the Internet allows the insult to be spread to a huge audience instantly. Because online communication does not require bullies to face their victims, the bullies may be even more aggressive than they would offline. The potential for anonymous bullying also increases on the Web. If the victims do not even know who is harassing them, ending the bullying could be difficult. Finally, cyberbullying can be even more invasive than traditional bullying because new technology allows the bullies to reach their victims anywhere; going home from school cannot shelter people from cyberbullying (David-Ferdon S3).

Bullying is not new. But as bullies adapt their harassment to utilize technology, parents, educators, and students will need to adapt, too, finding new ways to counteract bullies' efforts.

Figure 3.2—Traditional bullying vs. cyberbullying

	<u>Traditional Bullying</u>	<u>Cyberbullying</u>
<u>Contact</u>	<i>face-to-face—seeing victim might lead bully to ease off</i>	<i>distant or anonymous—bullies may be more aggressive</i>
<u>Speed of message proliferation</u>	<i>spreads gradually through word of mouth</i>	<i>spreads instantly through electronic communication</i>
<u>Persistence of harassment</u>	<i>words disappear or written messages destroyed</i>	<i>messages continue to exist online to be viewed by others</i>
<u>Escapability</u>	<i>victim can leave location of bullying (e.g. school)</i>	<i>victim might face bullying at home or other locations through technology</i>

Are Social Networking Sites Useful, or Just a Waste of Time?

Millions of people spend hours each day using SNS. In August of 2009, Facebook users spent an average of 5 hours and 46 minutes on the site over the course of the month—more than on any other Website (Ostrow). Is this significant amount of time spent on SNS wasted or worthwhile?

No one can answer this question for sure, in part because it is difficult for people to agree on what “worthwhile” means. One study by Pear Analytics suggested that most Twitter messages serve no purpose. For two weeks, the researchers recorded random weekday tweets every half hour between 11 A.M. and 5 P.M. They then categorized these messages according to their content. The researchers determined that 8.7 percent of the tweets had “pass-along value” because they gave newsworthy information, shared links, etc. Another 37.5 percent of the tweets were conversational, bouncing back and forth between two users. The category to which the most tweets belonged, however, was “pointless babble.” According to the researchers, more than four of every ten messages on Twitter contained no information of value, instead passing along details such as “I am eating a sandwich.” The research seems to suggest that Twitter is, for most people, just a waste of time that distracts them from doing more important things (“Twitter tweets are 40% ‘babble’”).

On the other hand, some individuals have suggested that despite appearances, this Twitter “babble” provides information that users find valuable. The seemingly meaningless status updates might actually serve a social function. Most people would consider it perfectly normal to begin a conversation by asking how the other person’s day

is going. In a sense, Twitter simply provides the same information without anyone having to ask the question. Furthermore, reading a friend's tweets can provide a glimpse of that person's daily life that the user finds satisfying somehow (Johnson). In the words of *Time* writer Steven Johnson, "Twitter turns out to have unsuspected depth. In part this is because hearing about what your friends had for breakfast is actually more interesting than it sounds."

Another viewpoint...

Inspired by Twitter and the then-upcoming release of Apple's i-Phone, *Time* writer Lev Grossman wrote an editorial called "The Hyperconnected" on April 5, 2007. Rather than helpful, Grossman found the data constantly coming to him addictive and distracting. He called Twitter "even smaller and more trivial than the individual blog entry" and compared the use of it to drug addiction: "It's like the cocaine of blogging or e-mail but refined into crack." Grossman feared that the constant stream of electronic data from others would rob people of their ability to "be alone with our own thoughts" and understand themselves.

The full essay is available at Time.com. What do you think?

Likewise, the brief interactions in which people engage on Facebook can have significance. Some of the teens in Sonia Livingstone's study spent more than an hour a day reading friends' profiles and leaving brief comments. Observers might consider such a use of time bland, but to the teens involved, the profile surfing was a way to stay in touch. Leaving comments served as a way of reaffirming one's place in the social network—the electronic equivalent of giving a nod or a "hey" to an acquaintance passing

by in the hallway (Livingstone 403-404). The teens perceived their SNS activities not as dull or pointless, but as an important component of their social lives.

With SNS, things that appear to be trivial might or might not be as unimportant as they seem. Undoubtedly, though, not all uses of SNS are frivolous. Observers might question the value of time spent raising electronic crops on Facebook's Farmville application, but even the harshest critics of SNS must admit that some people have used the sites in startlingly innovative and meaningful ways.

Political Uses of Social Networking Sites

Campaigns

SNS have become valued instruments for politicians seeking votes. The Internet had long been used as a fundraising tool for political campaigns, but the year 2008 marked a turning point in how politicians used the Internet. The change came in part because of the rising number of people who used technology to gather political information. Nearly half of all Americans reported using the Web, e-mail, or text messaging to gather political news or participate in the 2008 campaign. One of every 10 Americans reported logging onto a SNS to engage in the election. Accordingly, political leaders made sure that they could network with voters on these sites: more than 500 American politicians had Facebook pages during the campaign season (Fraser). Both of the major party presidential candidates, Barack Obama and John McCain, made significant efforts to gain support through SNS (Spaeth 439).

Obama's success in courting the youth vote through the Internet might have been a significant factor in his victory. More than 2 million Facebook users indicated their support for Obama, more than triple McCain's 600,000. Obama's Twitter account had

112,000 followers, while McCain's had 4,600. And while both Obama and McCain had channels on YouTube, Obama's channel had more subscribers by a 4 to 1 ratio. Obama was much more successful in generating enthusiasm among Internet users, a high percentage of whom belonged to the younger generation (Fraser). The digital efforts paid off in voting booths around the country—significantly more 18-29 year olds voted in 2008 than in the previous election, and they overwhelmingly supported Obama (Falcone).

Some experts project that Obama's successful use of the Internet and SNS will spark a widespread change in advertising techniques. Previously, advertising campaigns were orchestrated by a company that would arrange for placement in print publications, on television, etc. In contrast, the Obama campaign benefited from a large number of supporters doing the advertising on behalf of their candidate. Rather than buying influence through ads, the campaign enabled its backers to create videos, letters, and other content showing their support for Obama. These messages were more personal than traditional mass advertisements (Spaeth 440). The messages spread throughout the Internet **virally**, rapidly passing from person to person, and the number of Obama supporters grew. Such people-oriented marketing campaigns are likely to become more common in the future, offering an alternative to mass advertising. SNS will prove especially useful for viral campaigns. With extensive networks of contacts already in place, users can easily spread messages to others. Politicians of the future are sure to take advantage of this potential.

Grassroots Organization

But campaigning politicians are not the only ones who can use SNS for political purposes. Groups of everyday people concerned about a particular cause or issue

sometimes bond together in a phenomenon frequently called a “grassroots movement.”

Organizing a large group of people with common ideas can be a daunting task, but the connectivity of SNS can make it easier. The organizers do not have to write letters, place ads, make phone calls, or stand on street corners to find supporters. Instead, they can simply post messages on Facebook, Twitter and other SNS.

The Tea Party protesters represent a notable example of grassroots political action through SNS. While major leaders and organizations eventually backed the protestors, the Tea Party protests began simply. The movement took root as the result of Twitter responses to television commentator Rick Santelli. In February 2009, Santelli accused the government of promoting financially irresponsible behavior. After he suggested holding a “Chicago tea party” to protest government spending, a large number of like-minded people tweeted their agreement. Having found one another, citizens then used SNS such as Twitter and Facebook to organize rallies, raise funds, and generate mass responses quickly. For instance, The Tea Partiers used Internet communication to create a backlash against President Obama’s plan to speak to American children on the first day of school in September 2009 (Corbin). SNS helped the group both to form and to organize large-scale responses to government actions.

Protests over the 2009 presidential election in Iran provided a dramatic example of the political potential of SNS. The protests revealed tension between the powerful religious leaders who controlled the government and a young, educated generation of Iranians who desired more liberty. The challenger, Mir Hossein Mousavi, was perceived as a stronger supporter of democracy than the incumbent president, Mahmoud Ahmadinejad. After the Iranian government declared on June 12 that Mousavi had lost

the election, pro-democracy Iranians protested the results, claiming that the repressive government had rigged the election (Garner). In addition to rallying in the streets, the protestors voiced their opposition in cyberspace. Because of the Internet, the entire world could follow the protests.

In the early stages of the protests, Mousavi's supporters used Facebook to get information. Facebook reported that by June 19, a week after the elections, Mousavi had about 63,000 friends, up from about 2,500 the month before. Mousavi's profile became an electronic gathering point for his backers. They posted information and photographs supporting Mousavi. They also went to Facebook seeking knowledge of pro-democracy demonstrations that the government-run news organizations would not release, and the users sought tips for ways to get around the government's strict Internet controls. Predictably, the government responded by restricting Iranians' access to Facebook. A government-owned company controls all access to the Internet in Iran. The company drastically slowed Web access, and Facebook reported that its Iranian users were having difficulties accessing the site (Garner).

With Facebook effectively shut down in Iran, the protestors turned to Twitter. Because Twitter users can post information through mobile phones, the Iranians could publicize information without needing Internet access. Twitter was therefore more resistant to censorship than Facebook was at the time (Schleifer). The pro-democracy demonstrators used Twitter to tell the world what was happening inside Iran. Bloggers in other countries then drew attention to these tweets, publicizing the struggle and helping foreigners to feel connected to the news (Sullivan). People could hear the protestors in their own words through their tweets; without digital tools like Twitter, the Iranian

government could have choked off these voices. Recognizing this importance, the U.S. State Department contacted Twitter to request that the company delay some maintenance that temporarily would have shut down the site (Pleming). It seemed that everyone suddenly recognized how powerful a tool Twitter could be—including the Iranian government, which began to issue “decoy” tweets to mislead protestors (“Twitter on the Barricades”).

The protestors’ use of Twitter as an organizing tool may have been overemphasized: shouting from rooftops or car windows was just as effective in spreading word of demonstrations (Sullivan). But no one can deny Twitter’s utility in helping protestors to influence news coverage of the happenings in Iran. The Iranian government restricted journalists’ access to the events, but protestors could draw attention to videos, photographs, and written material related to the protests. Iranians also used a series of tweets tagged “#CNNfail” to criticize CNN’s coverage of the election protests. Even if older communication methods like word-of-mouth and standard text messaging were equally useful in gathering demonstrators, it was Twitter that enabled the impassioned Iranians to tell their story in their way (“Twitter on the Barricades”).

What They Tweeted

As the Iranian protests unfolded, prominent blogger Andrew Sullivan passed the demonstrators' tweets along to his readers. Here are a few Iranian messages about a protest that Sullivan discussed in an editorial:

- "It's worth taking the risk, we're going. I won't be able to update until I'm back. Again thanks for your kind support and wish us luck."
- "People were holding signs saying, 'We are not sheep.'"
- "Tens of thousands of protestors are chanting 'no fear, no fear'."

Later, forces associated with the government cracked down on the protests, leading to tweets like this one:

- "People are running in streets outside. There is panic in streets. People going in[t]o houses to hide."

The full editorial, titled "Twitter ripped the veil off 'the other'—and we saw ourselves" is available at the Times Online:

http://technology.timesonline.co.uk/tol/news/tech_and_Web/the_Web/article6544276.ece

The Iranian protestors did not succeed in toppling the government. The protests may still have long-term effects on Iran, but gauging their impact may prove impossible. Undoubtedly, however, social networking tools helped to shape both the demonstrations and how the world followed the news story, changing the nature of politics.

Marketing Uses of Social Network Sites

People and businesses seeking to spread word about products and services may find SNS useful. Millions of eyes scanning the sites can translate to millions of

consumers or supporters. Research suggests, however, that those seeking to advertise using SNS might need to use marketing models other than the simple displays of the past.

As discussed earlier in the chapter, the bands that created MySpace accounts were among the earliest people to utilize SNS for marketing purposes. The SNS allowed the bands to easily publicize information about themselves, post photos, distribute clips of music, and engage with fans. SNS also allow fans to engage with each other, helping to create the enthusiastic fan base needed for a musical artist to succeed. While looking at a friend's profile, a user might notice a link to the musical artist's profile and click on it. The SNS thereby helps the artist to accumulate new fans. This marketing potential is not limited to musicians, of course.

Hoping to get picked up by a television network, the creators of the reality show *The Loud Life* used SNS to create buzz about the show. The show follows concert promoter Mike D in Providence, Rhode Island, as he deals with musicians, sets up shows, and manages concerts. When the creators sent their show off to television networks, they got no response other than a "return to sender" stamp, so they turned to the Web (Lange, M.). *The Loud Life* has a MySpace profile, a Facebook profile, and a Twitter profile. A trailer for the show and other clips are available on YouTube and elsewhere. As word of the show spread electronically, more interest developed in *The Loud Life*, and the creators were contacted about the possibility of broadcasting the show on television (Lange, M.). Viewership on the Web led to greater opportunities.

Research suggests that the bands on MySpace and the creators of *The Loud Life* had it right: the best way to market a product through SNS is by taking advantage of the social aspect of the sites. Marketing campaigns that focus on spreading information

virally through SNS are more likely to succeed than campaigns that create digital equivalents of billboards. Because ads placed on Google became wildly profitable, SNS like Facebook tried to follow the same advertising-based business model. In comparison to Google, however, a substantially smaller percentage of people click on ads featured on SNS. The different uses of the sites lead to this discrepancy. People sometimes use Google to search for information about products, and Google targets them with related ads. In contrast, people use SNS to socialize, not to research purchases. Therefore, it stands to reason that SNS users will generally have less interest in ads that appear (Gilbert). Harvard Professor Mikolaj Jan Piskorski explains the difficulty of advertising on SNS in real-life terms:

A good analogy is to imagine sitting at a table with friends when a stranger pulls up a chair, sits down, and tries to sell you something while you are talking to your friends. You will not get far with a strategy like this. (Silverthorne)

The solution, says Piskorski, is for marketers to think more socially.

Viral campaigns can provide an effective method of marketing products through SNS. Viral campaigns hope to interest consumers enough that they will pass material on to other consumers. People communicating with others through a SNS might choose to pass along information from a viral marketing campaign, whereas traditional ads displayed on the sites could be viewed merely as annoyances. Harvard professor Sunil Gupta illustrates the possibilities of viral marketing through a hypothetical campaign by Sony:

Imagine that Sony wants to promote its new digital camera.

Sony can either advertise on Facebook and accept a very low click-through rate, or give away free cameras to several Facebook members (potentially at a lower cost than advertising) and generate a viral campaign. Our research shows that this viral campaign is possible. (Gilbert)

With a community of users already available on SNS to spread news, giving them something intriguing to pass along may be the most efficient way to generate interest in the product. Honda executed one such a viral campaign around Valentine's Day. Knowing that Facebook users can purchase virtual "gifts" to give one another, the company made 750,000 hearts freely available, complete with the Honda logo (Gilbert). Each time a user sent one of the free hearts to a friend, Honda got a little bit more publicity.

Dell Computers has used Twitter to market its products. The company, which has over 600,000 followers, releases product information and coupons through tweets. Dell credits its presence on Twitter with generating over \$3 million in revenue between 2007 and June 2009 ("Dell Says..."). Twitter sales still represent a small percentage of Dell's total sales, but as Twitter grows, so could Dell's revenue from the service. The company also utilizes Twitter to connect with its customer base and improve its products. About 200 Dell employees talk to customers using Twitter accounts, responding to complaints and asking for feedback. Twitter users reported to the company that the apostrophe and enter keys were too close to one another on Dell's Mini 9 Laptop, and the developers corrected the problem when designing the Mini 10. As they began the process of creating

the next generation of the computer, the development team asked around for ideas on Twitter (“Dell Says...”). This interaction will not only help Dell to create better products, but will also help the company to create an image of Dell as responsive to customers’ needs.

Dell is not the only company with a presence on Twitter: Starbucks, JetBlue airlines, and Whole Foods have also established themselves on it (McIntyre). The site has undeniable marketing potential, particularly if its plan for Promoted Tweets proves successful.

**Q&A with Matt Soule and Adam Swanson,
Co-Creators of *The Loud Life***

When you first started marketing The Loud Life, what sort of responses did you get?

When we started making *The Loud Life*, everyone we told about it (which was anyone who would listen) said that they thought it was a great idea, and that it would be a nice change of pace from the reality shows on TV now. People also started asking if the show was aiming to be on TV or shown strictly on the web. A few years ago, the only option was to have your show sold to a network, but with the success of so many webisodes, it's an entirely new option to consider.

What inspired you to use social networking sites like MySpace, Facebook, and Twitter to spread word about The Loud Life?

When we finished editing the pilot for *The Loud Life*, we had a "now what?" moment. We realized it was very difficult to get our foot in the door of a major network, and that lead to the idea of using social networking sites such as Myspace, Facebook and Twitter. We've been using these networking sites personally since they began, which made it a world we were comfortable in and understood. Since the two bands featured in the pilot episode (3OH!3 and Girl Talk) each had a large following of younger people online, we hoped that by putting clips onto these sites, they would send it to their friends, and build a fan-base for the show before it even got signed.

What kinds of content did you post on social networking sites to promote The Loud Life?

We posted a trailer for our show on social networking sites, as well as a few clips with the featured bands, and clips that showed each of the characters involved. We also wanted to keep fans interested and involved, so we continuously posted updates on what we were up to, pictures, and got the fans talking more about the show.

What sort of responses have you gotten about The Loud Life since it's been available online?

We realized very quickly that posting our pilot online was the right move for our show. Within weeks there were posts from fans asking to see more, newspapers and radio stations calling for interviews, and production companies emailing us with their interest in the show.

What advice do you have for other people who want to get their ideas and work out there for the public?

If someone wants to hear positive feedback about whatever it is they do, then I would say ask your family and friends. But if they really want to grow and get better, then the Internet will give them a great avenue to have their ideas and work seen and critiqued immediately. People will be brutally honest, but they know what they like. So if you can stomach it, throw your work and ideas into the world, and learn from the feedback you receive; it will make you that much better.

News Uses of SNS

SNS have increasingly been used for news purposes by professional journalists and others. News organizations have used SNS both to publicize news and gather information for reports. The sites also give people and organizations the capability to report news on their own. Instead of just providing information to journalists, who then write the information into stories, individuals can release news to the public themselves. SNS can help to transform news sources—celebrities, politicians, companies, government

organizations, everyday citizens, and others—into news reporters. In the words of basketball player Shaquille O’Neal, “In this world we live in now, everybody becomes media” (Gregory).

Chapter Four discusses the effects of SNS on journalism in greater detail, weighing both the benefits and dangers of their use for news reporting.

Conclusion

SNS are a young and developing technology, but a huge population has already adopted them into their everyday lives. Not all their effects on society have become clear yet, and supporters and detractors continue to debate the usefulness of SNS. Parents and teachers argue over whether SNS provide more opportunity or more danger for teens. People have argued that SNS are providing opportunities for communication that never existed before; other people have argued that SNS are impoverishing communication.

Regardless of one’s stance on them, no one can deny that SNS have affected communication and society. These changes can be understood through the lens of the four principles of the Internet detailed in Chapter One.

1. The Internet accelerates the speed with which information can be accessed and transferred.

SNS aid people in communicating with others quickly. Users can easily send messages, photographs, and other content to people located half a world away.

Consider the ways in which photographs were shared before the spread of the Internet and digital cameras. Aunt Sally wants to show her family pictures of her daughter Jenny’s graduation. Prior to the digital age, Sally would take photographs on a roll of film, then take the film to a store to be developed—perhaps she purchases enough

copies to send to the rest of the family. After 24 hours had passed, she could pick up physical copies of the photographs. She then purchases enough stamps and envelopes to send a picture to each family member. Most of the relatives would get the pictures through the mail two or three days later, perhaps wrinkled. Cousin Herbert in France, however, would probably have to wait a week.

All of this assumes that Aunt Sally wished to spend the money to send everyone an individual photograph. As an alternative, she could place the pictures in a book that she shows to relatives whenever they come to visit. Using a photo album in this way has advantages: it would save money, and it would let the relations see all of Jenny's graduation pictures instead of just one. Poor Cousin Herbert in France, of course, might have to wait weeks or years before he was in the area and could see the photographs.

In contrast, consider the posting of photographs online with a SNS. At no cost, Aunt Sally can upload pictures of Jenny's graduation for all of her friends and family to see, and the SNS can automatically notify those friends and family members that the photographs have been made available. So long as she has a digital camera and a computer with Internet access, Aunt Sally can easily share the photographs on the same day they were taken. If Aunt Sally has a mobile device with both a camera and Web access, the photographs can be posted to a SNS even more quickly. Cousin Herbert, sitting in his Parisian apartment, could see pictures just minutes after Jenny accepts her diploma. The speed of the Internet and the use of a SNS can help family members to share pictures for free and several days sooner than they could in the pre-digital age, or sometimes months sooner.

The speed of Twitter has enabled people to tweet their immediate reactions during events. Journalists attending a ceremony or meeting can post their observations and thoughts online in real time. In Iran, protestors provided near play-by-play descriptions of events. People across the world could read what was happening as it happened.

The Internet's speed makes SNS more useful, but it can also make SNS more risky. With just a few keystrokes, a potential employer could locate a compromising message or picture that a job applicant unwisely shared on a SNS. The privacy issues described in this chapter merit concern largely because the uninvited others can access personal information so quickly and easily.

2. The Internet connects people and organizations.

The potential for SNS to assist people in socializing is obvious—just think back to Cousin Herbert in France. SNS keep him connected to Sally and Jenny quite easily. The sites also enable communication with others who would remain strangers without the sites, joining people with common interests. The effects that these digital connections have on people's face-to-face relationships remains subject to debate.

SNS have become very important to many teens' social lives. Now, for many adolescents, part of establishing an identity is establishing an online identity. Teens explore possible versions of themselves through the manipulation of their profile and network of friends. They highlight their connections with others through SNS to show the world who they are. The connective capabilities of SNS can therefore aid teens in establishing their identities. On the other hand, the connective capabilities of SNS also have the potential of connecting sexual predators to their targets and giving bullies new avenues through which they can intimidate victims.

As SNS have grown and established more links between people, innovators have found new ways to utilize them. The sites can greatly assist the formation and organization of grassroots political organizations, and politicians can campaign using the sites. The potential for viral marketing on SNS has attracted groups ranging from large companies like Starbucks to virtually unknown musical artists. As fast as information can spread throughout online social networks, “unknowns” can become “knowns” quite quickly.

3. The Internet enables anyone to publish content.

SNS have become a means for people to gain a much larger audience than they could reach otherwise. After networks initially rejected their concept, the creators of *The Loud Life* turned to a range of SNS to try to create enough buzz to achieve a television deal. The sites provided an opportunity to share their show that would not have existed 15 years before.

The Iranian government prevented journalists from attending rallies, but the protestors were able to get news out to the world through Twitter. For Internet users around the globe, the Iranians became the reporters of their own stories, and they did so without direct connections to news organizations.

With SNS, people can publicize content with great ease. As some of the cases documented in this chapter reveal, though, users need to exercise care when deciding what to post publicly online and what to keep private.

4. The Internet drives businesses to adopt new models for making money.

The quest to turn a profit often involves both raising consumers’ awareness of a brand or product and raising its desirability; this requires marketing. With millions of

potential consumers on SNS every day, businesses have significant incentive to market their products and services on the sites. But efforts to merely follow the old advertising models developed for newspapers, radio, and television will not be effective on SNS. Consumers use these sites differently than they use the old media, actively connecting with others instead of just receiving content like editorials or sitcoms. Marketing campaigns that focus on the social aspects of the sites will be more likely to succeed (Gilbert).

The SNS themselves also need to develop innovative business models. The Internet and Google brought new methods of advertising, with ads targeted toward specific user interests. But even Google's wildly successful model, developed within the past decade, will not work everywhere on the Web. SNS have had a hard time making an advertising-based model stick. Thus far, the SNS in this chapter have had difficulty finding sources of revenue, leading some to doubt their long-term futures. To succeed as businesses, the SNS will need to discover new ways to receive payment for the services they can provide.

Key Terms

context collapse—the removal of barriers between previously separated aspects of a person's life.

cyberbullying—online harassment that is repeated over time and involves an imbalance of power between the perpetrator and the victim.

social networking site—a Web-based service that allows individuals to 1) construct a public or semi-public profile, 2) create a list of other users with whom they share

a connection, and 3) view their own list of connections and those made by others within the site.

user-targeted advertising—advertising that appears in response to a user’s online activities and interests.

viral—a term describing the rapid passing of information from person to person.

Review

1. True or False: most communication on SNS takes place between people who have already met one other offline.
2. What factors contributed to the demise of early SNS Friendster?
3. What challenges must Twitter face in the coming years?
4. Describe the benefits and risks of online communication compared to face-to-face communication.
5. Why is the use of the word “friend” sometimes misleading when applied to people connected on SNS?
6. Explain the following statement: “Profiles on SNS can act as identity laboratories for teenagers.”
7. Explain the impact of SNS like Facebook, Twitter, and YouTube on the 2008 presidential election. Also explain how politicians might put the lessons of 2008 to use in future elections.
8. The marketing department of a corporation proposes two ad campaigns for placement on SNS. The first proposal is to place an ad on the righthand side of the SNS Webpage, containing the name of the product and a photograph of a celebrity using it. The second proposal is to create a humorous video about the

celebrity using the product, then sending links to the video out to SNS users who have connected their profiles to the company's.

Which campaign is likely to be more effective? Why?

Discussion

1. Have you experienced any instances of context collapse when using SNS?
2. Of MySpace, Facebook, and Twitter, which sites do you think will still exist in 15 years? Why?
3. As people engage in more and more electronic communication, do you think their capabilities for face-to-face communication will be affected? Do you think today's teenagers show any sign of such changes?
4. Do you think the concept of privacy will disappear, as some critics fear; do you think it will remain essentially the same; or do you think it will change? Explain.
5. Have you witnessed any incidents of cyberbullying?
6. What advertising have you noticed on the SNS you use? How effective do you consider this advertising to be? How could the effectiveness of advertising on SNS be improved?

CHAPTER FOUR: JOURNALISM

How it used to be...

Around 1990, before the World Wide Web, people got their news from television, radio, news magazines, and newspapers. The majority of Americans read the newspaper regularly, with 67 percent of households buying a newspaper ("Newspapers: Audience"). Depending on where they lived, readers might be able to choose from a couple of different local newspapers, or they might only have access to one. The newspaper was almost certainly issued once per day, so if an event took place too close to the publishing deadline, subscribers would have to wait until the next day to read about it. They could, perhaps, turn on their television sets instead: stations might push aside their regular program to maintain continuous coverage of an exceptionally big story. Lesser stories would be reported on the nightly news programs featured on the major television networks: NBC, ABC, and CBS. The local television station would present one news program focused mostly on the region, and the national network would present another program focused on national and international news. Like the newspapers, television networks presented the news at limited times during the day. Also like the newspapers, the network news programs attracted large audiences, in part because viewers had little choice but to tune in at the designated time.

Limited options existed for people who wanted to hear news at any other time. They could turn on the radio, as stations devoted to news coverage had existed for many years. Just recently, a 24-hour television option had also developed in the form of the Cable News Network. Not everyone had cable television, but those who did could turn to CNN for national news coverage at any time during the day.

No matter what source a consumer chose for information about current events, professional journalists would have written or recorded the news. Newspapers,

television stations, and radio stations either employed their own reporters or paid to use the news reported by other organizations' employees. Everyday people might chat about the news at work; they might also write letters to newspaper editors or call in to radio stations. They could not, however, present news or opinions to a large audience. That capability belonged to professionals.

Today, a person can turn to the Web to get information about a story within an hour of its happening, if not within minutes. Internet users can get the news and opinions from a newspaper's or television station's Website, or they can get news and opinions from a blogger who might or might not be a professional journalist. Any person who wishes to report news herself or publicize his opinions can easily create a blog. Users can also report information using tools established by some major news organization, or they can simply post it on Twitter. A web user can access news from professional or amateur sources from anywhere in the world, and at any time.

Without reporters who spread information about current events, democracies cannot function effectively. Democracy is based on the belief that people should choose their own leaders. Unless citizens are informed, both about the leaders themselves and the issues those leaders face, they cannot make wise choices. Understanding the necessity for the free flow of information, the Founding Fathers provided for freedom of the press in the First Amendment to the Constitution, and the Supreme Court has issued a number of rulings that reinforce the freedom of reporters to research information and give it to the public. American citizens have always depended on news reporters to shed light on important issues and expose wrongdoing. But while the need for an independent press

has not changed, the ways in which journalists present the news, and the ways in which citizens consume it, have continually transformed. In turn, these changes to journalism affect how Americans understand their government and their world.

The Internet continues to revolutionize news reporting and the news audience. Early in the history of the Web, news organizations treated it as one more way to publish stories in the same way as in the past. As time passed, however, the speed and connectivity of the Internet changed the very nature of the news business. Organizations reported the news around the clock instead of waiting for a predetermined deadline. The traditional news organizations found themselves in competition with a wide array of other news sources, in part because members of the news audience became participants in the news process. The old model of journalism was like a lecture: professionals passed on information to an audience full of listeners. The rise of amateur journalists and commentators blew apart this traditional model: a number of audience members began to talk back, turning the lecture on the news into a conversation about the news.

While exciting and freeing in some ways, these changes also concern many observers. Because of the Internet, the news is not the same as it used to be, and no one is entirely sure of what the future of journalism will hold. In the words of Dave Winer, who pioneered blogging and RSS, “Today, 2010, is Year Zero for journalism the way 1970 was the dawn of modern computer science.”

Defining Blogs

Weblogs are notoriously difficult to define. The first chapter in this text defined blogs as “Webpages that individuals or groups regularly update.” This definition, while accurate, is necessarily vague because blogs can vary widely. With millions of blogs in the world, covering

different topics and approaching blogging in different ways, only such a broad definition can fit them all. Blogs can be personal diaries, educational aids, or marketing tools; they can feature heavy interaction with readers or none at all.

When speaking of topics relating to the news, however, the term “blog” most often refers to a “political blog.” These blogs comment on current events, often linking to articles on news websites or posts from other political blogs (Cho). Throughout this chapter on journalism, the word “blog” should be understood as referring to political blogs unless the text states otherwise.

How Newspapers Make Money

In order to understand how the business model for Internet news developed, one needs to understand the basic business model that newspapers have traditionally followed. For decades, newspapers have made their money through advertising. Readers

THE TRADITIONAL NEWSPAPER BUSINESS MODEL

Newspapers kept prices low and made most of their money through advertising.

Lower Price→→→→→→→**More Readers**→→→→→→→**More Advertising Income**

paid for copies of most newspapers, but this charge did not cover the cost of publishing the newspaper. The papers were sold below cost in order to attract more readers. If more people saw the pages, then the advertisements on those pages would get more attention. And the more attention the ads got, the more the advertisers would be willing to pay to put the ads into the newspaper. Therefore, newspapers kept the prices of the papers low. They might lose money on the paper itself, but if the newspapers could get a large enough audience, they could turn a significant profit by selling advertisements to businesses and individuals.

When they first began publishing on the Web, newspapers followed the principles of this old business model. Within a decade, however, serious questions emerged about whether that model could succeed on the Internet.

The History of News on the Web

News organizations had already been publishing content electronically on the World Wide Web's precursors, but 1994 marked the beginning of Web-based news publishing. On January 19 of that year, the *Palo Alto Weekly* of California became the first newspaper to regularly publish on the World Wide Web. Twice a week, the paper posted its full content; it did not charge visitors to the site (Carlson, D.).

More papers followed. *USA Today* started offering its content on the Web on August 21, 1995, also for free. Exactly five months later, *The New York Times* opened its Website. Users had to register in order to access the site, but there was no charge (Carlson, D.). By February of 1996, the National Newspaper Association listed 162 newspapers as having electronic pages on the Web (Peterson). The overwhelming majority of these sites cost readers nothing, though the *Wall Street Journal* bucked the trend by charging \$49.95 per year for access to the online Interactive Edition that it launched in May 1996 (Carlson, D.). One writer playfully called this decision "apostasy," a desertion of deeply-held principles (Quittner). Content on the Web was free for users, and only a very few news outlets challenged that assumption.

Despite the lack of immediate revenue from readers or advertisers, newspapers rushed onto the Web, motivated by "fear and greed" (Peterson). Their Websites cost more money than they made in those early days, but the papers feared that if they did not establish a presence on the Web, a competitor would, undercutting their profits. No one

knew how yet, but many people believed that the Web would yield significant income someday, and news organizations wanted to build an audience and be in position to reap those rewards (Peterson).

Newspapers hoped the Web would help them to combat the problems they were facing: a declining number of readers and declining profits.

Newspapers had been wildly profitable in the 1980s, but by 1996, they had seen a decline. They still made money, but their revenues were down from their 1980s heyday, when they dominated advertising. By the mid-'90s, businesses seeking to advertise could do so through several other avenues, including cable television, direct mail, niche publications, and online services. More competitors meant fewer advertising dollars for newspapers (Gleick). The advertising profits also declined because of decreasing audience sizes. Readership had been steadily declining for several years (Peterson). Some newspapers hoped they could expand their audience through the Internet, making up some of the lost ground. In the words of Howard Tyner, then-editor of the *Chicago Tribune*,

The name of our business is how many eyeballs look at our content. If you look just at ink on paper, the number of eyeballs is going down. But to all the people thumping their breast about the end of the daily newspaper, I say “Phooey.” (Gleick)

The company's actions matched Tyner's words: the *Chicago Tribune* developed \$7 million plans to renovate its building to help the print, Internet, and cable television operations to work more closely together (Gleick). Other newspapers also poured

millions into online operations. At the time, the audience for online news was far smaller than the audience for print, so very few newspaper Websites (if any) turned a profit (Zuckerman). Nonetheless, visions of cash flowing in from online advertising drew newspapers to the Web.

A host of newspapers established Websites, but at first, most took only limited advantage of the Internet's potential. They did make use of the Internet's limitless space: a physical copy of a newspaper could only contain so much information, but the Internet could hold as much detail as the newspapers wanted to upload. Newspapers therefore posted interview transcripts, original documents, and other supporting information for readers who went online to delve deeper into stories. They also played host to online discussions of the news, giving readers a chance to interact with one another on the sites (Zuckerman). Still, news organizations did not yet fully understand the power of the Internet's connectivity; they gave the public only limited ways of communicating back to the organizations. According to media critic Jon Katz's 1996 evaluation of online news sites, the traditional media had rushed online without recognizing the difference between traditional publishing and online communication with the masses:

While journalists are in the communication business, that communication has been mostly one way: from the top down. Online media is about one person communicating to many—and many communicating back: it's about community building rather than simple "publishing."
(Quittner)

More complex interactions with the audience would come in later years, but the early versions of newspaper websites mostly served merely as another platform for the media to publish stories. The Internet also enabled the media to present news much more rapidly than in the past, but initially, newspapers were reluctant to put their content online before it appeared in print. Updates appeared on the sites throughout the day, but these usually came from wire services like the Associated Press. As a result, the news sites were very generic during the day: people seeking online updates from *The Washington Post*, *The Los Angeles Times*, *The New York Times*, *Time*, *Newsweek*, and *U.S. News & World Report* would likely have all read the same stories. The standard practice among news organizations was to withhold their “crown jewels”—their original reporting—so that readers seeking the most up-to-date information would either have to settle for generic stories or pay for the print edition (Zuckerman). The publishers intended this protectionist policy to maintain print sales. They feared that if their websites delivered reporting before their physical product hit the streets, consumers would choose to read for free online and stop buying newspapers or newsmagazines. As the director of one newspaper Website said in 1997,

The whole idea of scooping ourselves is troubling to a lot of people. There are grave concerns within the newspaper industry about the extent to which new media are going to cannibalize the existing services that we provide to our customers. (Zuckerman)

Worried about how the Internet would affect their core business, the media avoided using the Internet’s speed.

In addition to ignoring some of the Web's powers, newspapers often gave their Websites only lukewarm support. News organizations often viewed their Web publications as experiments rather than as part of their core business. Frequently, the small staffs responsible for the Website were kept physically separate from the main newsroom. And with newspapers seeking to maximize profits through budget cuts, organizations were reluctant to divert scarce resources to their electronic publications (Zuckerman). The news organizations wanted a Web audience, but did not want to throw their full weight behind online efforts. Financial journalist Jamie Heller described this halfhearted approach as follows:

Even when the conventional media companies lent their brand names to Internet ventures, for fear of being left behind, the backing didn't always come with critical corporate support—financial, or perhaps more important, psychological. And often, as companies proceeded with on-line plans, the staffers at their flagships continued to see the Internet start-up not as a cool, new-media sibling, but as the ugly stepchild.

Heller quoted an anonymous writer at a business magazine who said working online was perceived as the journalistic equivalent of exile “in Siberia.” Wendy Nelson, who had edited the site New Jersey Online, recalled sending e-mails to her print-based colleagues and getting ignored (Heller). These recollections seem difficult to believe today, but a 1996 *New York Times* column by Frank Rich demonstrates the disdain that print journalists held for online news:

As a professional medium for breaking news, the Internet is, if anything, what TV news was in its infancy—a toy for those with time and money on their hands. It repackages print and television journalism with interactive sideshows much as networks of the early 50's dressed up recycled print and radio reportage with primitive visuals. Like TV before it, the Internet will soon move far beyond this embryonic stage. But for the moment unwired news junkies needn't worry that they're missing much...

Elsewhere in the same column, Rich describes online features like video clips as “elaborate Cracker Jack prizes.” He does suggest that online news will develop into something more significant, but a reader cannot mistake Rich's dismissive attitude toward Internet journalism.

The late 1990s brought changes to online news. As more and more respected journalists began publishing on the Web, online journalism gained status (Heller). Furthermore, many organizations started asking print reporters to contribute to online publications (“On Web...”). With the distinction between offline and online news operations blurring, disrespecting electronic journalism made little sense. Cooperation was required if news organizations wanted to become 24-hour news outlets that continuously gave news to the audience. Television news sites had taken the lead in quickly posting original material online, in part because they had been better prepared to do so. In the words of one CNN staffer, they “inherited a culture of putting out the news when it happens” (Barringer). Television news sites had also begun to provide the in-

depth material that consumers could formerly get only from newspapers (Barringer).

Increased competition led newspapers to “beef up” their staffs of online journalists and add more multimedia offerings to their websites (Barringer). Slowly, newspaper sites began to publish original content online more frequently, without waiting for the release of the print edition (Barringer). Newspapers began to take online news more seriously: what had formerly been the responsibility of a small and isolated staff was morphing into an all-hands-on-deck effort. Media critic Howard Kurtz wrote in September 1999,

As the journalistic precincts of cyberspace turn increasingly competitive, newspapers are transforming themselves into 24-hour news machines, in part by asking their print reporters to do double duty. The result has altered a tradition-encrusted newsroom environment that has never had to deal with round-the-clock deadlines. (“On Web...”)

Internet journalism was growing up, but the news environment was far from done changing.

Not long after they began appearing in droves, blogs developed into a vibrant force in journalism. Blogging became a widespread practice in 1999, when sites such as blogger.com enabled casual users to create weblogs without having to know programming language. While a number of blogs chronicled the writers’ personal lives, many of them also started discussing news. Relatively few blogs reported new facts; a great deal more offered commentary and opinions on current events. Journalists turned to this new medium before long, though in the beginning, almost none of them received

income from their blogs (Fleishman). Some, like *Fortune* and *Newsweek* contributor Deborah Branscum, relished the freedom of publishing their writing on their own, quickly and without editors poring over their work. Observers began speculating that blogs would fundamentally alter the news business, with amateurs staking out a claim in the field. Simple software could give an everyday person the capability to act as reporter, columnist, analyst, and publisher of an individual news site that reached hundreds or thousands of readers (Lasica). The possibilities excited and concerned people at the same time. Asked in 2001 if blogs would create a new form of journalism, Branscum replied, “I’m not quite willing to go there... So far, the weblogs I’ve seen tend to be less about actual reporting and more about analysis and punditry and opinionated commentary” (Lasica). Her criticism would remain the main charge against blogs for several years.

The traditional media first reacted to the trend with puzzlement, but soon began to establish blogs of their own. In 2003, a piece in the *Columbia Journalism Review* gave an overview of blogs among the traditional media. FoxNews was one of the leaders in incorporating bloggers, featuring about ten blogs on its site. *The Spokesman-Review* of Spokane, Washington was also at the forefront, offering a dozen blogs by reporters who covered areas such as crime and sports. Most of the news organizations listed, though, had more limited weblog offerings. The *Sacramento Bee*, for instance, had one blog, and the ABC News site was noted for having one blog called “The Note,” which was dubbed a “must-see...for political junkies” (Welch). *The New York Times* did not even appear on the list: the paper did not offer a weblog until late in 2005. But as time passed, blogs multiplied among the mainstream media. The *Sacramento Bee* and ABC News each offered 18 by 2009 (“Blogs and Columnists”; “Blogs, Opinion, and Analysis”). Within a

year of joining the blogosphere, *The New York Times* featured 15 blogs (“New Looks...”). As of November 2009, the *Times* offered more than 40 (“RSS”). Many news outlets now expect reporters to maintain a blog on top of other responsibilities (Kinsley). Blogs have proliferated in the amateur ranks, too, with an incredible variety populating the Web. In the coming years, non-professional news blogs would enrich journalism on many occasions, but some media critics still continue to wonder whether amateur bloggers will do more to enhance journalism or endanger it.

Blogs have also become important to the news business because some of them function as aggregators, collecting links that direct their readers to news elsewhere. The Drudge Report, launched in 1995, did much to introduce the world to news aggregation. The politically conservative site features sensationally titled links to stories across the Web. After gaining readers during the Clinton administration’s White House intern scandal, founder Matt Drudge became a highly influential figure who could direct thousands of followers to stories that he highlighted on his page (Sapelli). The Huffington Post functions similarly. Founded in 2005 as a politically liberal counterpart to the Drudge Report, the Huffington Post grew rapidly and eventually gained even wider readership than its predecessor. In February 2009, 8.9 million users visited the Huffington Post, giving it significant power to lead Internet users to news items (“Arianna Huffington”). In addition to these two sites and numerous smaller operations, Google News aggregates news content. Launched in September 2002, the service automatically searches through over 4,000 news sources to present headlines, summaries, and links for users (“Corporate Information”). Like the Drudge Report and the Huffington Post, Google News sells advertisements. Critics charge that this practice

allows the sites to profit unfairly from the reporting of others. News aggregation remains controversial, with both friends and foes among the media.

Overall, the Internet has changed journalism drastically and become an integral part of the news business. Online publication of journalism began as an experiment, but due to both its growth and the decline of physical newspapers, it now has an audience roughly as large as that of printed news, as Figure 4.1 shows (“Key News Audiences”). News Websites now bring significant income for many companies.

Figure 4.1—News audiences for different media

Newspaper Readership Declines; Internet News Increases								
	<u>1993</u>	<u>1996</u>	<u>1998</u>	<u>2000</u>	<u>2002</u>	<u>2004</u>	<u>2006</u>	<u>2008</u>
<i>Listened/read yesterday...</i>	%	%	%	%	%	%	%	%
Newspaper	58*	50	48	47	41	42	40	34
Radio news	47*	44	49	43	41	40	36	35
<i>Regularly watch...</i>								
Cable TV news	--	--	--	--	33	38	34	39
Local TV News	77	65	64	56	57	59	54	52
Nightly network news	60	42	38	30	32	34	28	29
Network morning news	--	--	23	20	22	22	23	22
Online for news three or more days a week	--	2**	13	23	25	29	31	37

* From 1994; ** From 1995.

SOURCE: “Key News Audiences Now Blend Online and Traditional Sources,”

Pew Research Center for the People and the Press. Accessed 4 Aug. 2009.

But while online news now brings profits to news organizations, the Web has not been the financial godsend for which the newspaper industry had hoped. Prices for online advertising have remained significantly lower than print advertising, so newspapers’ electronic publications have never been as lucrative as their paper editions (Liedtke). The decline in print readership and rise of Internet news has led newspapers to reconsider how their Websites can produce revenue. The longstanding business model of Web news—giving away content for free to attract visitors, then selling advertising—has

been questioned more and more. At the end of the 21st century's first decade, newspapers found themselves in a position of uncertainty, looking for new ways to squeeze profits out of online operations.

The remainder of this chapter examines the trends, innovations, problems, and questions that have developed over the 15 years that news organizations have been publishing on the Web.

The Internet Develops Trends in Journalism: The 24-Hour News Cycle and Audience Segmentation

With the development of Internet news, people can access news that is updated around the clock and tailored to their specific interests and viewpoints. Commentators have coined the term **24-hour news cycle** to describe the continuous reporting of the news. The term **audience fragmentation** refers to the breaking up of the mass audience into numerous smaller audiences, each seeking its own particular breed of news. These realities significantly influence not just how consumers receive their news, but how news organizations report the news. Both the 24-hour news cycle and the process of audience fragmentation began prior to the explosion of the World Wide Web, but the Internet has contributed significantly to these trends.

The expansion of cable television led to the modern 24-hour news cycle. As cable spread to more and more households, the Cable News Network (CNN) began broadcasting in 1987 (Carlson). With more and more viewers turning to cable instead of network programming, two competing cable news networks started up in 1996—MSNBC and the Fox News Channel (Zoglin). Combined with the World Wide Web, the development of these cable news channels gave viewers the option to receive news at any

time during the day. Technology had freed the news from a restrictive schedule. But the expansion of news reporting into a 24-hour news cycle also changed journalism itself. Channels promising news content for every hour of the day needed to fill all those broadcasting slots. Reporting facts about current events did not take up enough time: major stories break only occasionally, and on most days, only so much fresh information comes out. News outlets began to hype even minor stories so they could fill their airtime. In 1996, CBS News president Andrew Heyward noted,

We seem to have lost a sense of proportion. Everything is made to seem equally important, from the fall of the Berlin Wall to the latest scandal in Washington. We lack the vocabulary to convey the true importance of some events, because we're always moving on to the next thing. It serves to trivialize the news. (Zoglin)

Routine stories were inaccurately blown into big stories, and big stories into huge ones. Such exaggeration impairs the effectiveness of journalism by undermining the public's trust. People will distrust journalists who seem to lack sound judgment. As with the boy who cried wolf, journalists who frequently pretend to have important information may be unable to raise the alarm when something truly important happens (Kovach 76). The battle for ratings contributed to this problem. Attempting to find and hold an audience, news channels tried to continually fill viewers' plates with servings of fresh news, promising a daily special even when the offering was of no real note. The networks now had 24 hours of news programming to fill, and to draw in viewers, they needed to continually promise something of interest.

The Quest for Big News

In their book *Warp Speed*, media researchers Bill Kovach and Tom Rosenstiel explain how the media kept searching for the next big story after the trial of former football star O.J. Simpson ended in 1995. The 24-hour news networks had based their programming around Simpson's murder trial, write Kovach and Rosenstiel, and needed another story to fill its place. The media became fascinated with a string of sensational stories, including the murder of child beauty pageant contestant Jon Benet Ramsey and the death of British Princess Diana in a car crash. Both stories have at least two things in common. First, the media became fixated on them, endlessly reporting and discussing even the tiniest developments. Second, they have no relation to the government, the economy, or any other practical topic that impacts the lives of Americans. News organizations covered these stories not because of their importance, but because the organizations hoped to draw large audiences for the next "blockbuster" story (75). According to Kovach and Rosenstiel,

...the potential of such stories to hold an audience...is why all news environments like CNN, CNBC, and MSNBC become...All Diana, or All O.J. The alternative, to slowly build a newscast or a network that delivers a huge menu of news, takes more time, more creativity, and—most important—more money and reporting effort. (75)

Networks filled much of the air time not with news reporting, but with news opinion. By televising talk about the news, the networks could stretch an otherwise minor story for a significant length of time. Explaining the facts of the event might only

take a minute or so, but having “experts” debate about the event could take 10 times as long. In many cases, networks chose these news commentators not for their knowledge, but for their tendency to speak boldly, if not inflammatorily (Kovach 65). The content on news channels became less about information and more about bombastic opinions. For networks, such news talk proved cheaper than original reporting. Paying teams of reporters to do research, and supporting them, is expensive: paying a few television personalities to express their views on current events costs much less (Kovach 7). Networks therefore broadcast news-related content at every time during the day, but did not actually report any more news than they had before. Many media critics condemned this practice as cheapening the news, such as in this passage from a 1996 *Time* article:

What has exploded is not news, but talk about the news; commentary, not information...MSNBC fills its airtime with a corps of interchangeable “contributors” who offer seat-of-the-pants opinions on whatever the big story of the day happens to be. It’s cocktail party chat passing as journalism. (Zoglin)

Cable television thus began the 24-hour news cycle, and the Internet intensified it. To utilize the Internet’s speed, newspapers stopped holding back information until publication. News people had always desired to be the first to break a story (Okrent). Now, because the Internet brought them into competition with hundreds of other news sources, newspapers wanting to attract readers by being first had to act even faster. Seeking to update stories around the clock, reporters often submit fragments of stories instead of waiting to piece together the whole story about an event. Journalists working

in this way are less likely to spend time sorting through information; they might relate dozens of facts without ever describing the heart of the story. As a result of this rapid and piecemeal news process, genuinely important facts become lost in the constant stream of news tidbits (Kovach 6). The need for speed can also lead journalists to be less accurate. Rather than waiting to check information thoroughly, news organizations sometimes rush the stories onto the Web. For instance, during the White House intern scandal of the Clinton administration, the *Dallas Morning News* and *The Wall Street Journal* hurried news stories onto their Websites that soon proved to be false (Kansas). Not long after publishing the stories, the papers were forced to publish retractions (Shafer). The desire for blazing speed led the newspapers to make embarrassing mistakes.

In other cases, reporters rushing to get news online have posted official **press releases** rather than researching and writing their own stories (Fritz). A press release is a written or recorded announcement of information directed at the media (“Press release”). Organizations like corporations, government agencies, schools, clubs, and others often write press releases as a way of communicating information to reporters, whom the organizations hope will publish the information. The organizations benefit from creating press releases because they themselves control what information the documents contain. Whereas reporters might uncover and print unfavorable details, writers of press releases can select only the information that lends their organization the best possible appearance. For instance, a company seeking to explain a fatal accident might issue a press release explaining what happened, expressing regret, and promising to investigate the cause so that future accidents can be prevented. But if the company had caused the accident by

failing to repair damaged equipment, that detail would likely be left out of the press release. In contrast, a reporter who had carefully researched the story would definitely include the newsworthy information that the company's negligence had caused someone's death. Because press releases are biased in such ways, journalists who rely too much on them are unlikely to report details critical of the organizations. Ideally, reporters would use press releases as one source of information, but would supplement their stories with original research that might give a more balanced picture. A lack of time, however, leads reporters to do less thorough research. Already stretched thin by staff cuts, journalists feeling the pressure of the 24-hour news cycle may be even more likely to pass press releases on to the public without checking for further information. Indeed, survey data released by the Pew Research Center in 2010 found that journalists were increasingly giving press releases to the public as news. The researchers cited rapid Internet publication as a cause of this increase (Fritz).

The benefit of having news 24-hours per day comes with costs. The Internet did not begin journalistic haste, but it does contribute to the problem. As Professor Todd Gitlin explained in 1999, "What we face...is not an acceleration from zero to 60, but the move from 60-80..." (Kansas). This further acceleration leads to rushed research and more errors than would have existed before. Furthermore, the 24-hour news cycle pressures journalists to hype stories and constantly push new information into the public eye. With the media always searching for the next big headline, important stories often fall out of sight before they have run their course (Okrent). Frequently, new and important facts take a back seat to the constant commentary on cable television and the

Web. Opinion crowds out real information. The 24-hour news cycle may devote more time to “news,” but it has thus shortened journalism’s attention span.

On the plus side, however, people can now receive information immediately after it happens, rather than having to wait for a broadcast or print edition. The 24-hour news cycle also allows the audience to receive news content when it wishes, rather than on the regimented schedule of the past.

This less structured news schedule contributed to audience fragmentation. In decades past, most Americans received their news from the same sources. People had limited choices of newspapers and television news broadcasts, which meant that newspapers and networks could count on mass audiences. In 1981, 41.2 percent of all American homes with televisions watched the nightly news on one of the three major networks. Fifteen years later, that number had dropped to 26.1 percent (Zoglin). The availability of the news at different times played a significant role in this decline. As former NBC News president Michael Gartner explained, “It used to be that the networks could say to me and you, ‘Sit down at 6:30. That’s when we will give you the news.’ Now we pick when we have time to watch the news” (Zoglin). Even before Web traffic skyrocketed, varied news options on cable television split mass audiences into segments. As more people turned to the Internet for their news, the audience groups became still smaller: users could surf news from anywhere in the world at any time.

The mass audience split into different groups based not only on time slots, but based on their interests. Television programs and Websites catering to political liberals and political conservatives developed. Liberals might watch Keith Olbermann on television or visit the Huffington Post online; conservatives might tune in to Glen Beck or

navigate to the Drudge Report. Especially with Internet news sources, both groups could turn to numerous options. The Internet became the ultimate tool for specialized news. New York Yankee fans, UFO buffs, feminists, and gun enthusiasts can all visit Websites devoted to their own particular views and interests (Zoglin). In one sense, this development represents a significant advancement. Specialized news was much more difficult to find prior to the Web. Now, people with particular interests can find the news that they want.

The splitting of the mass audience into a host of smaller groups has also had negative effects on both the news business and the public. Newspapers made huge profits during the 1980s because they commanded a mass audience and provided advertising opportunities not available elsewhere. The changing market for advertising and the fragmenting of the audience have cut into the profits of traditional news organizations (Gleick). The separation of news audiences might also have an impact on how the members of those audiences think. When everyone in town read the same newspaper and watched similar network newscasts, all the citizens received essentially the same information and views from the media. But with audiences split apart according to their attitudes and interests, citizens can receive very different information than their neighbors. Studies have shown that people generally practice **selective exposure**, the tendency for individuals to expose themselves to communications that agree with their existing attitudes and avoid communications that do not (Severin 80-82). If people turn to news sources that interpret current events according to perspectives they like, they might find it harder to understand the viewpoints of those who disagree with them. People who regularly listen to interpretations of news from far-right conservatives like

Sean Hannity, for example, would likely have difficulty coming to agreements with people who tend to seek out information and ideas from far-left liberals like Michael Moore. In this way, audience fragmentation could be increasing the distance between people with differing political attitudes. With many people receiving information that only reinforces their own views, finding common ground might become increasingly hard.

A Closer Look: The Effects of Selective Exposure

The Drudge Report and the Huffington Post lean toward opposite ends of the political spectrum. Generally, Drudge favors conservatives and the Republican Party, while Huffington favors liberals and the Democratic Party. But how different are they?

At approximately 9:50 p.m. on November 21, 2009, both sites linked to stories related to two topics: a Democrat-sponsored Senate bill to reform health insurance, and a recently released book by former Republican vice presidential nominee Sarah Palin. The specific stories and the tone of the sites, though, differed greatly.

On the Drudge Report:

- An ad appeared at the top of the page urging viewers to “Kick Harry Reid Out of Office.” (Reid was the leader of the Democrats in the Senate.)
- A story about the Democrats had the following headline: “CRACKS SHOW IN DEM CAUCUS— COULD SINK BILL...”
- The main headline criticized a deal that persuaded a Louisiana senator to vote with the Democrats: “The Louisiana Purchase: \$300 Million for My Vote!”
- The first article about Palin’s book came under the headline, “PALIN SELLS 300K ON FIRST DAY; TOPS HILLARY” [Clinton, a well-known Democrat]

On the Huffington Post:

- The main headline celebrated the Democrats' victory in a vote: "Senate Democrats Beat GOP [Republican] Filibuster: 60-39."
- Two articles about Sarah Palin's book featured prominently on the site. One discussed a Saturday Night Live comedy sketch about the book. The other had the headline, "Palin Booed by Book Tour Crowd."

Visitors who viewed only their preferred site would not just get different interpretations, but different facts. Such selective exposure would tend to make the differing visitors even less likely to understand issues in similar ways.

The Internet has altered news reporting and the news audience, not by breaking sharply with the past, but by intensifying trends that had already begun. Audiences once settled down to consume the news at set times during the day. Cable television started eroding that habit, and the Web transformed it (Bird 293). The Internet aided in the establishment of the 24-hour news cycle and the fragmentation of the mass audience. Both developments have altered the news environment in potentially harmful ways. To blame the Internet for ruining journalism, though, oversimplifies the issue. The Web accelerated the pace of the news and the disintegration of the mass audience, but the media had started down those paths before most people had ever sent an e-mail.

BACK TO THE FUTURE

Historically speaking, the 24-hour news cycle and the fragmented audience are not necessarily as new as they seem. In the February 15, 1998 edition of *The New York Times*, Jack Shafer explained how the Internet was really taking journalism back to an earlier time:

The forces that compel journalists to break news at hyperspeed may sound futuristic, but actually they hark back to the speediest time in American journalism: the turn of the century. In New York in 1900, there were at least 65 daily newspapers (counting the vital ethnic press), whose reporters scrambled to match and beat the competition. The new technology of the telephone, which many reporters disparaged when it was introduced (because it de-emphasized legwork), became as indispensable as the shorthand pad. Whenever the news cycle demanded it, dailies would publish "extra" editions (similar to the instant "extras" that some news organizations now publish on the Web). The variety offered by the newsstand in those times almost approached that of the Web today. Back then, New Yorkers could choose the demagogic fulminations of William Randolph Hearst's New York Journal, the prim institutional voice of Adolph Ochs's Times and papers representing all points in between. Determining the truth value of stories was left up to readers and editors...

Shafer's full article, titled "The Web Made Me Do It," is available at www.nytimes.com.

The Internet Innovates Journalism

In some ways, the Internet only served to further journalistic developments already in the making. In other ways, however, the Internet brought transformations that were wholly its own. The speed and connectivity of the Internet made it possible for

aggregators to pull in information from a huge variety of sources, repackaging it for readers. And because the Internet gives everyone the capability to publish content quickly and cheaply, bloggers and citizen journalists emerged. All of these innovations bring both opportunities and pitfalls to the field of journalism.

News Aggregators

As defined in Chapter One, **news aggregators** are sites that collect news from many Websites to present to readers, drawing attention to items of interest. Aggregation can take many forms, from the automated processes of Google News, to major operations like the Huffington Post, to a man posting a news item to his blog while he sips coffee in his living room.

Aggregators claim to help both readers and news organizations. With a multitude of news sites available on the Web, aggregators can help users to find the news they want. At the Huffington Post, staff members view themselves as similar to museum curators: they find quality material from other sources and artfully exhibit it for visitors (“Arianna Huffington”). The creator of Google News, Krishna Bharat, believes his service encourages readers to get a broader perspective, reading 10 articles instead of stopping with one. In the eyes of the company, Google News helps the public to remain informed and helps the media by keeping readers tuned in to the news. As one Google manager explained, “Google makes the news more accessible and more interesting—encouraging people to read more and so benefitting the industry as a whole” (Heald).

Aggregators also help news providers in a more concrete way by sending readers to their sites. Normally, a person living in Florida might get news from local sources. But if that person goes to Google News or the Huffington Post, she might click on an

article created by a Minnesota newspaper, driving up that newspaper's number of visitors. In 2007, for instance, the Drudge Report link to just one story on *The Los Angeles Times* Website accounted for one of every four visitors to the paper's site that day (Sappell). More readers can mean more dollars, as an increase of visitors can lead to greater ad revenue. For this reason, some news organizations consider news aggregators helpful. The founder of the Huffington Post has stated that her site gets a hundred requests every day from editors and reporters hoping the site will link to their stories ("Arianna Huffington"). To these members of the media, aggregators act as partners who can boost readership numbers. Newspaper executive William Dean Singleton explained why his company, for one, supports Google News: "The Internet is a very competitive world... We don't have to let them take our content. We let them do so because it drives traffic" ("Google Puts Small...").

Media mogul Rupert Murdoch, on the other hand, has referred to news aggregation as "theft." In his view, aggregators attract visitors to their sites by using material that others have produced. Aggregators make money by selling advertising, but leave the original news organizations with the burden of paying to uncover the news (Murdoch). Google News, the Huffington Post, the Drudge Report, and other aggregators turn profits largely by using the material of others, and some news organizations perceive the aggregators as stealing away Web visitors rather than adding them. Google News links to hundreds of different newspapers, but most visitors only read headlines and summaries without actually reading the full, original article. The average Google News visitor only clicks through to the original site about 10 percent of the time (Heald). Rather than acting as a guide, then, the aggregators often act as the

final destination for news; the organizations that actually researched the news do not get many more visitors. The practices of some aggregators make this problem even worse. Google News provides only a short summary of news stories, but some bloggers repost large sections. If Web users can get most details about a story from the aggregator, they have little incentive to click through to the original source. When aggregators repackage news, the organizations that did the original reporting do not always receive enough credit. In one case, the Huffington Post used information from the *St. Petersburg Times* of Florida to create a story about a football player who survived a storm at sea. A Huffington Post editor received credit for having written the story—even though 80 percent of the article was taken word-for-word from the original source (“Arianna Huffington”). Such practices sometimes deny a fair share of the profits to the news organizations that pay to research a story.

Furthermore, even when aggregators do push a huge number of visitors to read a story on a newspaper’s site, that does not necessarily help the newspaper financially. Newspapers get most of their revenue from local advertisers who care about local readers (Sappell). These advertisers will pay money to get the attention of readers who might actually visit their business; they do not care about Website visitors from across the country. Imagine that a car dealership in Minneapolis, Minnesota, purchases ads on a local newspaper’s Website. If a larger number of Minneapolis residents begin to view the site, the car dealership’s ad will reach more potential customers. The newspaper might then be able to charge more for this more valuable ad space. The car dealership will not care, however, how many people from Florida or Colorado see the newspaper’s Website; residents of Orlando or Denver will not travel to Minneapolis to purchase an

SUV. Therefore, a large number of Web visitors scattered around the United States will not help a local newspaper to increase profits very much. Most of the readers brought in through a news aggregator will be of this nationwide variety, so news organizations without a national following will probably benefit little from the increased Website traffic (Chittum). This undercuts the value of the visitors that newspapers receive from news aggregators. Additionally, aggregators tend to funnel visitors directly to an individual article on a site, skipping the news organization's home page. Because more people see the home page than any other section, news organizations can charge the most for ads on the home page. By channeling visitors directly to articles, news aggregators cause them to bypass the home pages that can provide the most income for news Websites (Heald). While news aggregators may boost the number of eyes looking at a story, they will not necessarily boost revenue.

News organizations frustrated by aggregators may begin to fight against them. Murdoch's News Corp., which owns *The Wall Street Journal*, discussed removing its content from Google and then charging search engines for linking to its stories ("News Corp."). In years to come, this plan or revenue-sharing partnerships might help news organizations to gain profit from aggregation. Some news organizations might also take legal action. Aggregators claim that their use of news material is fair use under American copyright law, but some aggregators walk a fine line between legality and illegality, and the media might challenge their claims in court. Some media researchers believe that it is only a matter of time until aggregators face lawsuits ("Arianna Huffington").

To Sue or Not to Sue? Copyright Law and the News

Like movies and music, writing is protected by copyright law. Violating copyright protection is akin to plagiarism—it is wrongfully using someone else’s work. The essence of copyright is that writers, artists, and others control the rights to their work, and if someone else uses that work, that person needs to pay the copyright holder.

While the idea sounds simple, copyright law becomes complex when related to news organizations and aggregators who use portions of their content. No one can copyright the facts of the news, but news organizations own the rights to the wording used in the articles they publish. However, given the proper set of circumstances, someone may use a *limited* portion of the copyrighted work and stay within the law. Many aggregators use passages of copyrighted news materials on their sites, but how much is too much?

For a more detailed discussion of copyright law and the news, read Jeffrey D. Neuberger’s article “A Brief History of AP’s Battles with News Aggregators” on the PBS *MediaShift* site:

<<http://www.pbs.org/mediashift/2009/05/a-brief-history-of-aps-battles-with-news-aggregators146.html>>

The relationship between aggregators and other news organizations has been an uneasy one. Some news organizations support aggregators, and others oppose them. All news organizations, though, would love to find ways to get cash from the aggregation of their stories.

RIPPED-OFF: ORIGINAL REPORTING VS. AGGREGATED STORIES

When he first learned that the news aggregator Gawker repackaged his story in the summer of 2009, Ian Shapira felt flattered. Later, he felt angry. Shapira had carefully researched his story about a “business coach” who charges clients between \$500 and \$2500 for each seminar. In a *Washington Post* piece titled “The Death of Journalism (Gawker Edition),” Shapira described the time he spent preparing the story:

- 1 hour on the phone with the business coach getting biographical details
- 30 minutes driving to the business coach’s seminar
- 2 hours attending and recording the seminar
- 4 hours typing a transcript of the recording
- One day writing the story

The Gawker writer, Hamilton Nolan, did no original research, using Shapira’s story as his sole source and including a large portion of quoted material from Shapira’s story. Nolan spent between one half hour and an hour commenting on Shapira’s work, then posted his version of the story.

The link on Gawker drove some extra visitors to the *Washington Post* Website, but other visitors would not have bothered to read Shapira’s article when significant portions of it appeared on Gawker. The *Washington Post*—which paid Shapira for his work—received no money from Gawker for the borrowed content.

The full story about Shapira’s beef with Gawker appears here:

<http://www.washingtonpost.com/wp-dyn/content/article/2009/07/31/AR2009073102476.html?sid=ST2009073103389>

The *Washington Post* also hosted an online chat in which Shapira responded to critics who defended Gawker. The chat transcript is available here:

<http://www.washingtonpost.com/wp-dyn/content/discussion/2009/07/31/DI2009073102615.html>

Blogs

Since they first muscled their way into journalism, blogs have been controversial. News bloggers saw themselves as Davids taking on the Goliaths of the mainstream news industry. For their part, members of the traditional media viewed the bloggers as unprofessional hacks. In 2002, *Salon* writer Scott Rosenberg described the debate as follows:

Typically, the debate about blogs today is framed as a duel to the death between old and new journalism. Many bloggers see themselves as a Web-borne vanguard, striking blows for truth-telling authenticity against the media-monopoly empire. Many newsroom journalists see bloggers as wannabe amateurs badly in need of some skills and some editors.

Rosenberg went on to call this debate “stupidly reductive” for casting the issue in a simplistic “bloggers vs. journalists” frame. As Rosenberg wrote, the truth was more complex: bloggers and journalists are not mortal enemies. While conflicts still emerge between some bloggers and journalists, bloggers have made undeniable contributions to journalism, working with and becoming integrated with the traditional media.

The explosion of blogs shook up journalism partly because of how individualized blog posts felt to readers. Compared to newspaper stories, blogs often sounded more

vivid because bloggers would include their own voices and emotions as part of the writing—personal touches that newspaper editors tried to eliminate in order to maintain **objectivity**, or freedom from personal feelings and interpretations. Traditional news organizations tried to separate such opinion from the news. Blogs, on the other hand, tend to openly blend opinion and news. According to the bloggers, frankly stating their own views makes them more honest. Traditional journalism might appear objective, bloggers have argued, but remained selective in its coverage and subtly slanted in its writing. Rather than trying to hide biases, bloggers embraced them and used their individual passions to attract communities of readers (Froomkin). The blog of someone angry about marijuana laws, for instance, would likely be read by visitors who shared the blogger's views. Readers' interactions with each other and with the blogger would bring a human touch to the news and keep visitors interested in the blog. The highly personal nature of blogs brought freshness that contrasted to the "stale" style of the newspapers, according to media critic Howard Kurtz. Kurtz explained that "...bloggers have a voice and emotions and are speaking directly to you...Newspaper stories often seem like straightjackets, incremental, dulled down..." ("Blogs: Good or Evil?") The spread of blogging gave a vast number of people the ability to publish their thoughts, and to supporters, the strong individual voices that came from this diversity helped to enliven journalism.

Critics, however, have accused blogs of reveling in style while producing too little substance. From the early years of the weblog, bloggers have been criticized for writing opinions without adding many new facts (Lasica). Blogger Jonathan Last summarized this criticism in 2006:

...the biggest evil of blogs is...blogging's original sin: the discounting of news-gathering in favor of news analysis...Opinion writing is a tiny...corner of the journalistic world. Real journalism—the practice of adding to the store of public knowledge by reporting news—is a difficult, thankless, and often unpleasant task. (“Blogs: Good or Evil?”)

Professional news organizations spend considerable time and money gathering information, providing news that blogs are very unlikely to find on their own. In fact, most political bloggers depend on news organizations to provide the information they write about. In some form, the world does need the professional media. This does not, however, mean that the world has no use for blogs.

Under the view of their harshest critics, bloggers fill the Web with sound and fury that signifies nothing; they hurl opinions and speculation into cyberspace that do little to enrich the public's understanding of issues. Inarguably, some blogs have deserved such scorn. The dismissal of all blogs as valueless, though, is a mistake. In several instances, the characteristics of the weblog format enabled bloggers to make significant journalistic contributions.

“Pulitzer Prize for Murder”—When Bloggers Were Wrong

With so much speculation and opinion filling the blogosphere, many of the ideas expressed are bound to be founded on incorrect information and assumptions. In April 2005, for example, bloggers began to criticize an Associated Press photograph that won the Pulitzer Prize. The photograph depicted election workers in Iraq being killed by insurgents who opposed U.S.-led efforts to establish a government. The bloggers claimed that the photograph was taken at such close range that the photographer had to have been tipped off by the terrorists who committed the murder. To support their claims, the bloggers analyzed camera angles and discussed lens characteristics. Blogger Scott Johnson of Power Line went so far as to declare, “The Pulitzer Prize for felony murder goes to the Associated Press.” After the Associated Press released details of why the photographer was on the scene and how the shot was made, the bloggers moved on and the controversy died.

To many observers, such harsh accusations, supported only by speculation, present a significant danger of the blogosphere.

SOURCE: Palser, Barb. “Journalism’s Backseat Drivers.” American Journalism Review.

August/September 2005.

Because they encourage review and analysis of news items, blogs can help to provide context for facts and keep stories in the public eye. Relatively early in their history, in 2002, blogs were instrumental in bringing down Senator Trent Lott of Mississippi. In December of that year, Lott spoke at the 100th birthday celebration of Senator Strom Thurmond of South Carolina. He praised the senior senator by recalling

Thurmond's 1948 presidential run, declaring, "if the rest of the country had followed our lead, we wouldn't have had all these problems over all these years, either." The crowd was shocked—in 1948, Thurmond's Dixiecrat political party supported the continued segregation of blacks from whites ("Lott Decried..."). Several journalists heard the racist remark, but the majority did not consider it newsworthy. A few television news broadcasts briefly mentioned Lott's comment, but then the remark faded from the airwaves. However, Lott's comment also appeared on the ABC News Website (Scott 8-10). Bloggers became aware of the remark and began posting reactions to it. Notably, several bloggers provided historical information about Thurmond's presidential campaign and its views. Understanding the offensive remark required this background. When only a limited number of people in newsrooms saw the story, the chances were relatively slim that many reporters would have the historical knowledge necessary to explain Lott's comment to readers. But with thousands of bloggers reading the quote, the chances rose that someone could make the connection between Lott's words and Thurmond's racist past ("The Legend..."). Several bloggers gave their readers both the quote itself and a miniature history lesson. As bloggers linked to one another, the blogosphere buzz about the story increased, and eventually the offline media noticed (Scott 23). Stories appeared that discussed not only Lott's comment about Thurmond, but other racist comments that Lott had made on previous occasions ("The Legend..."). Eventually, the controversy forced Lott to resign his position as incoming Senate majority leader. By looking more closely at the story than the traditional media had, bloggers furthered the cause of journalism and kept the Lott story alive.

Blogs allow more voices to comment on a story, which can sometimes help valuable information to come to light. Since they give a wide variety of people a platform to express ideas, blogs can help experts in obscure subjects to influence the news. The controversy over a 2004 CBS news story showed how bloggers could make such contributions to the public discussion of current events (“Blogs: Good or Evil?”) The network aired a story about six typed documents from the 1970s that criticized President George W. Bush’s service record in the National Guard. After CBS published the documents on its Website, bloggers wrote posts pointing out problems with them. The typing on the documents seemed to have come not from a 1970s era typewriter, but from a modern computer. Critics attacked the CBS story over a number of other issues as well, but the bloggers definitely helped to expose the forgery by publicizing the problems with the font (Walsh). By giving individuals a method of quickly publishing information, blogs helped knowledgeable people to raise questions about the documents’ authenticity. The simplicity of writing a blog has permitted people to influence the news whose knowledge may not have come to light without the weblog medium.

Blogs have also publicized important information not from lone experts, but from communities of people who pool their knowledge through a blog. In 2007, Joshua Micah Marshall’s blog, Talkingpointsmemo, covered the firing of a U.S. district attorney in Arkansas. The blog’s readers responded, noting similar firings in other cities across the United States. Talkingpointsmemo linked to local news stories that detailed these firings, and a major scandal emerged. The firings had nothing to do with a poor performance by the attorneys; they had been dismissed because the Bush administration’s Justice Department had disagreed with their political views. Talkingpointsmemo continued its

investigation through the help of its readers, who completed “assignments” like examining thousands of pages of documents that the Bush administration released to the public. The traditional media picked up the story, and eventually, Attorney General Alberto Gonzales was forced to resign (“Blogger, Sans Pajamas...”) Marshall received a major journalistic award for his efforts, but he did not uncover the scandal alone: bloggers and readers worked together to discover information. Using contributions from thousands of different readers, Talkingpointsmemo “connected the dots” and brought the whole picture into focus (Long Island University). Unlike traditional newspapers and broadcasts, blogs feature a real-time back-and-forth dialogue between the writer and the audience. In the case of the district attorney firings, thousands of heads proved to be better than one.

As bloggers made such positive contributions and more people accepted blogs as part of the media landscape, the old argument separating blogging from journalism became less and less relevant. In 2008, an editor for the *Washington Post's* Website opined that the controversy had fizzled:

...the argument about bloggers vs. journalists has been over for years... We've all co-existed just fine for a while now, and the truth is, the distinction is less relevant every day. There are thousands of journalists who now blog, and there are lots of bloggers who are trained journalists.

(“Distinction Between Bloggers...”)

Questions remain about blogging's role in journalism, but no one can doubt any longer that blogs have a role to play. Media outsiders still write blogs, but so do mainstream

journalists. Blogs cannot completely replace traditional journalism, but they still have a contribution to make. As the blogger Atrios explained, bloggers do occasionally report original information, but most often, their role is to work with the material provided by traditional news organizations. Blogging, he said, is “more about focusing on stories which would otherwise be buried or simply focusing on key details from stories which may be overlooked” (Scott 5). The traditional news organizations can seize on such material from blogs and publicize it for the mainstream news audience. At their best, weblogs and the communities of people who read and write them help to make sure that important news reaches the public.



Bloggers, Reporters, and Sherlock Holmes Characters

In the Sherlock Holmes short stories, the famous detective sometimes paid a group of street children for assisting him by scrounging up leads. Writing in 2004, blogger Rebecca Blood cited this group, the Baker Street Irregulars, to help explain how quality bloggers could aid in the newsgathering process:

...bloggers do amazing research. Professional journalists, often working under extreme time pressure, may not have time to research a piece as thoroughly as they would like. Bloggers have no externally imposed deadlines, and no mandate to research equally the claims of both sides. Reporters would benefit by regarding bloggers as modern Baker Street Irregulars. When bloggers link to conflicting or contextualizing material, smart reporters will further research and verify

promising leads, and credit the bloggers who uncovered them.

SOURCE: http://www.rebeccablood.net/essays/what_is_journalism.html

Non-Professional Journalism

The day after Christmas in 2004, a massive earthquake in the Indian Ocean created a tsunami, with waves that sped toward land at the speed of a jetliner. Across 11 countries, more than 150,000 people were killed and millions more made homeless (“The Deadliest...?”). Journalists found the catastrophe noteworthy for more than its destruction—the tsunami disaster marked the emergence of citizen journalism. Especially at first, much of the news from the affected areas came not from professional journalists, but hundreds of everyday people armed with digital cameras, cell phones, and blogs (Srinivas). Through video, images, and words, witnesses and survivors revealed a tragic and terrifying story to the rest of the world. Bloggers on the scene brought a human element to the destruction, providing local context and a raw perspective that gave the story more immediacy than faraway professional journalists could (Schwartz). Recognizing this power, the Associated Press Television News agency, which provides footage for hundreds of broadcasters worldwide, ordered its staff to find amateur video (Srinivas). Everyday people vividly told the tale of the tsunami, and blogs helped to link readers to firsthand accounts. The natural disaster will be remembered most for its devastation, but the coverage of it marked a significant development in the history of journalism. An editor of the *Guardian Unlimited* described the hours and days after the catastrophe as

a time when citizen reporting, through the force of its huge army of volunteers and their simple type and publish weblog mechanisms, finally found its voice, and delivered in a way the established media simply could not. (Srinivas)

With tools like blogs available on the Web, witnesses themselves could now readily tell the world what they saw. When the tsunami struck, the people on the scene reported the story more personally and more quickly than traditional journalists.

With the creation of Twitter in 2006, the public could spread news even faster and more easily. In January 2009, 150

passengers were rescued from a U.S.

Airways jet that had made an

emergency landing in the Hudson

River. Despite the fact that the event happened in New York City—in close

proximity to the headquarters of international wire services, major newspapers, and major television networks—a Twitterer posted the first image of the downed plane, beating professional reporters to the punch (O'Connor).

Witnesses also used Twitter to spread information when gunmen went on a killing spree in Mumbai, India in November 2008. The tweets coming from Mumbai allowed the rest of the world to follow the story in real time and hear it in the words of those affected by it. Twitterers broadcast details of the violence instantly, long before traditional media could have gotten the same information. Combined, the Twitter messages told a powerful story. Because tweets can spread news so fast, with many

**Figure 4.2—Hudson River Twitpic
Photo by Janis Krums**



individuals telling pieces of a story, New York University Professor Jay Rosen argued in 2010 that Twitter “is a more effective system than any single news organization at serving breaking news” (“BTW...”). The attacks in India revealed this power of the crowd. However, the Twitter stream of information flowing out of Mumbai was not perfectly reliable. Some false reports spread alongside the accurate information (Caulfield). Since anyone can tweet, Twitter can give air to rumors and falsehoods, sometimes from people who only pretend to be familiar with a situation. On the other hand, proponents of Twitter point out that the information flow is self-correcting: other users will catch the misinformation and speak out against it. True tweets, they argue, will correct a false tweet. During the Mumbai attacks, Twitterers did debunk some of the false messages in precisely this way—but not before reporters for the United Kingdom’s BBC reported some of the misinformation as true (Masouras). Twitter and other Web tools have given common people the power to spread news, but that information may or may not be accurate. Turning to amateur sources for the news can lead to erroneous reports, as the BBC and CNN have learned.

CNN’s iReport demonstrates how unedited citizen journalism has benefits and risks. Launched in August 2006, CNN intended iReport to enable citizens to participate in the newsgathering process. A year after iReport began, CNN hailed the initiative as having “grown and developed its ability to be an integral component of the network’s coverage” (“I-Report...”). Citizens had aided the network in its coverage by providing photographs and video of a bridge collapse in Minneapolis, a campus shooting at Virginia Tech, and an industrial accident in Dallas, among other contributions (“I-Report...”). The iReport initiative received the most attention, though, for its most notable failure. In

October 2008, a user named Johntw posted an iReport stating that Apple CEO Steve Jobs had been rushed to the hospital following a severe heart attack. Word of Jobs' medical emergency spread throughout the Internet, and the price of Apple stock dropped significantly. But the report was false. Johntw had used iReport to spread an unfounded rumor that caused a \$9 billion loss in Apple shares before the company denied the report (Harmanci). In cyberspace, rumors travel fast and do damage just as quickly. Erroneous reports by careless—or dishonest—citizen journalists can cause significant harm if they spread across the Internet.

In the traditional news media, reporters and editors chose what to publish. They served as gatekeepers for the news, determining what news would be released to the general public. In the new media, shaped by the Internet, gatekeepers cannot control all the reports that come from a multitude of amateur writers and journalists. This frees the flow of information by allowing everyday people to communicate news to audiences. But this freedom for the crowd also means that the gatekeepers have lost much of their capability to prevent the spread of misleading or non-newsworthy information. If a blogger wants to write wild speculations about a politician's marriage, for example, he can publish outrageous stories all on his own. His writing can reach many readers without passing through a newspaper's "gate," where editors might correct the story or stop it.

To complicate matters, professional journalists eager to break a story sometimes fail to act as gatekeepers. Such reporters have occasionally published false news before carefully checking information provided by a citizen journalist. This happened at the BBC during the Mumbai attacks and at a well-known online magazine during the Steve

Jobs incident on iReport. The online magazine *Silicon Alley Insider* posted the rumor about the heart attack approximately 25 minutes after the false iReport. About 15 minutes later, Apple's stock price began to drop (Harmanci). Because of the speed and ease of Internet publication, news can flow into the public's view without having been confirmed by a professional journalist. For better or worse, in the Internet age, journalists and editors act less as gatekeepers than in the past. Sometimes the gates are missing; other times, the gatekeepers are asleep.

For some public figures, the capability to present information directly to the public, unfiltered through the news media, has given them more control over their public images. Professional athletes, for instance, have used social networking sites to publicize themselves and their causes. In the past, fans got to know these athletes mostly through the writing of professionals, but the Internet enables the athletes to express themselves in their own words. Sportswriter Peter King explained the communication power that Twitter has given Cincinnati Bengals wide receiver Chad Ochocinco:

He gets out his message -- as ill-versed as it sometimes is -- the way he wants the message gotten out, and, as of Sunday, [August 30, 2009], 137,679 people were following him. Listening, presumably. It's not necessarily an apples-to-apples comparison, but as of June, the circulation of the *Cincinnati Enquirer* was 188,956. He's being heard the way he wants to be heard, and by a huge segment of Bengaldom.

Professional athletes are not the only ones using the Web to shape information about themselves. The Obama administration established a White House Twitter profile that sends followers links to press releases and other documents handpicked by the administration. By the end of 2009, more than 1.6 million Twitter users followed “@whitehouse.” Such social media efforts can help politicians to communicate directly to the people without depending on journalists.

But despite the preceding examples, nonprofessional journalism does not have to operate in place of traditional journalism: everyday people have partnered with the traditional media with striking results. The *Guardian*, a publication in the United Kingdom, innovatively utilized citizen journalists in a cooperative effort in 2009. Members of Parliament in that country were discovered to have claimed inappropriate expenses for reimbursement. Notoriously, one lawmaker billed the government £1,645 (more than \$2,500) for a floating duck house, placed in a pond at his home. Once the scandal broke into the news, the government released hundreds of thousands of documents, publicly revealing the expense reports for every Member of Parliament. Sorting through so many documents would take a newsroom staff a huge amount of time, so the *Guardian* found a different method: staff members loaded all of the documents onto the newspaper’s Website and asked the public to examine them. After looking at a document, users could click buttons to tell the newspaper what kind of document it was and whether it warranted further investigation. Within the first 80 hours, more than 20,000 volunteers examined and categorized more than 170,000 documents, making the newspaper’s job significantly easier (Andersen). The crowdsourcing effort at the

Guardian was phenomenally successful. Visitors to the Website aided significantly in the investigation of the news, one document at a time.

Figure 4.3—A *Guardian* expense report feedback page

Page 26 of David Mundell's Communication Allowance 2007/08

This document has 91 pages (see all)

← Previous | Next →

What kind of page is this?

Claim An expense form

Proof Receipt, invoice or purchase order

Blank Nothing to see here

Other Something we haven't thought of

Is this page interesting? Should we investigate further?

Not interesting e.g. a coversheet or stationery

Interesting It's significant expenses data

Interesting but known e.g. it's a duckhouse

Communications Allowance 2007 DEC 8 1 Comms2 page 1 of 2

Direct payment of suppliers

When to use this form ■ Use this form to ask us to pay your suppliers for goods and services incurred on your Parliamentary duties.

About filling in this form ■ For details of costs you can claim for please refer to booklet on Communications Allowance.
■ If you have any doubt about whether you can claim for a cost, please call 020 7219 1340.

Your details

Name IN CAPITAL LETTERS

Constituency

Office use only

Claim details

You can only request payment to suppliers for goods and services directly relating to Communications Allowance. Please ensure you attach all supplier invoices.

Period of claim from to Allowance year

SOURCE: <http://mps-expenses.guardian.co.uk/page/219531/>

The Off the Bus initiative during the 2008 presidential campaign featured even more ambitious cooperation between professional journalists and amateurs. The organization sought to cover aspects of the election that the traditional media did not (Michel 42). Ultimately, more than 12,000 volunteers assisted in some way (Michel 43). Some were given research assignments. When campaign workers were taken hostage at a Hillary Clinton campaign office in New Hampshire, Off the Bus editors contacted a nearby volunteer who investigated by visiting the alleged hostage-taker's neighborhood and speaking to his wife (Michel 43). When the organization wanted to research former

president Bill Clinton's impact on his wife's fundraising, five different volunteers with accounting experience reviewed the relevant figures. Two professional journalists then used the results to write a story on the topic (Michel 44). Throughout the campaign, Off the Bus gathered information through the efforts and expertise of amateur volunteers, and the volunteer editors—either professional journalists or amateurs who had passed an editing test—helped to rework the material into stories (Michel 43). With so many volunteers working, Off the Bus had resources that a traditional newsroom does not, and the professional editors helped to maintain journalistic standards. Following this formula allowed Off the Bus to provide valued nationwide coverage of the campaign for the low cost of \$250,000 (Michel 43).

A Citizen Journalism Success Story—Off the Bus

The Off the Bus organization broke its biggest story after volunteer Mayhill Fowler recorded a Barack Obama address in which he discussed rural, working-class voters: "It's not surprising then they get bitter; they cling to guns or religion or antipathy for people who aren't like them." Obama's comment angered many people and became a nationwide topic of discussion. If the citizen volunteer had not recorded the remark, the public would never have known about it: Obama made the "bitter" comment at a private fundraiser closed to professional journalists. But as a donor to the campaign, Fowler was invited, and she broke the story.

SOURCE:

Michel, Amanda. "Get Off the Bus." The Columbia Journalism Review. March/April 2009.

As the Web continues to alter the media, the role that citizen journalists can play remains a key question for the future of the news business. While volunteer journalists are unlikely to replace the traditional media entirely, their work can lead to significant contributions. Recognizing this potential, *The New York Times* and the non-profit Pro Publica organization jointly requested a grant for a project named “Document Cloud.” The newspaper and the nonprofit will use the \$719,000 in grant money, awarded in October 2009, to create a free online database of documents contributed by news organizations, watchdog groups, and bloggers. They hope that sharing these documents with the public will empower citizens to do research, in turn helping reporters to benefit from “the wisdom of the crowd” (Abell). Innovative efforts like Document Cloud, the crowdsourcing at the *Guardian*, and the Off the Bus program suggest that citizen journalism has yet more potential to be discovered. Amateur journalists might prove indispensable in the future. As veteran journalist Bill Kovach explained, “Since there is no guarantee that journalists will be at the right place at the right time to report important events, the new journalism must be one that is open to both amateur and professional reporters” (Calderone). Narrow-minded dismissal of citizen journalism can only serve to hamper the development of news reporting methods for the 21st century.

Are Bloggers, Aggregators, Citizen Journalists, and Online News Killing Newspapers?

The new opportunities that the Internet has given to journalism have come with a cost, and some observers have wondered whether that cost is too great. While journalism on the Web expands, news staffs around the country face reductions. According to the blog Paper Cuts, newspapers cut more than 14,500 jobs in 2009 alone (Smith).

Reductions of this size mean that significantly fewer reporters are gathering the news. For instance, a 2009 survey by the *American Journalism Review* reveals a serious decline in the number of reporters covering state government. In 2003, 40 reporters were dedicated to state coverage in the California capital of Sacramento, 35 in the New Jersey capital of Trenton, and 14 in Atlanta, Georgia. By 2009, those numbers had shrunk significantly: 29 reporters remained in Sacramento, 15 in Trenton, and only five in Atlanta (“As Newsrooms...”). A decreased number of reporters has led to a decreased number of stories. The non-profit Project for Excellence in Journalism confirmed this decline by comparing *Baltimore Sun* news coverage from the first 11 months of 1991 to the same time period in 2009. For every ten stories that the newspaper produced in 1991, the paper produced approximately three in 2009. Staff and budget cuts led to this sharp falloff (Fritz). Cost-slashing reductions in Baltimore and elsewhere were made partly because newspapers have lost readers. Since the early 1990s, the proportion of Americans that read a newspaper on a typical day has decreased by about 40 percent (“Key News”).

By the Numbers

Rick Edmonds of the Poynter Institute estimates that newspapers spent a total of \$6.2 billion on newsroom operations in 2006. In 2009, he estimated, that figured was \$1.6 billion less—a loss of more than one-fourth of newsroom funding in just three years.

With the numbers of reporters and readers both trending downward, many observers have expressed worries that newspapers and professional journalism are dying while new Web journalism expands. Web journalism, they fear, lacks the quality of

traditional journalism and fails to adhere to journalistic standards. Furthermore, they note that the sort of journalism practiced by bloggers often just recycles information uncovered by professional journalists. Professor S. Elizabeth Bird of the University of South Florida wrote of such concerns in 2009:

...as I ponder the future of journalism, I find this news environment both exciting and depressing. Its democratic potential is real: it allows citizens a voice as never before. But the vast majority of online “news” is really commentary on news that originates from the declining number of professional journalists... surely effective democracy requires the existence of news organizations that employ professional journalists who know how to report new information, not merely recirculate it... The challenge will be whether the current economic and cultural climate will permit the survival of an informed and independent journalism.

Traditional journalism faces severe challenges. Meanwhile, the number of bloggers and citizen journalists continues to grow, and an increasing portion of the population turns to the Internet for news. Between 2006 and 2008, the proportion of Americans getting news online at least three days a week went up from 31 percent to 37 percent; the percentage using the Internet daily for news increased from 18 percent to 25 (“Key News...”). The declining fortunes of newspapers and the ascendancy of the Web have led some people to ask the question, “Is the Internet killing newspapers?”

The answer is more complex than the question.

For one thing, the decline of newspapers' readerships actually began long before the Internet spread into homes across the United States. In 1970, 78 percent of American adults read daily newspapers. By 1995, that number had decreased to 64 percent (Gleick). Surveys have also shown that Americans read books less than in the past, so the drop may be related to a general decline in reading (Weber). Reading newspapers might also be a habit that younger generations simply did not pick up: surveys have regularly shown that younger people are less likely to read newspapers than their parents (Gleick; "Key News...") Regardless, the trend away from newspaper reading began prior to the boom of the Web in the mid-to-late 90s.

Furthermore, getting news from the Internet does not mean that a person has chosen to abandon newspapers in favor of the Web. People who go online for news often still consult traditional media sources as well. A 2008 survey by the Pew Research Center for People and the Press found that only 13 percent of the population uses the Internet as their main source of the news. Over a quarter of the people in this group, which the researchers called the "Net Newsmen," still read a newspaper daily ("Key News...") The researchers dubbed the group that consumed the most news on average the "Integrators" because they relied on a variety of sources for the news. The Integrators, composing 23 percent of the population, tend to rely mostly on television, radio, and newspapers for the news, but one-third of the Integrators listed the Internet as their main news source ("Key News...") Neither the Net Newsmen nor the Integrators see news consumption as a "one or the other" choice between the Web and traditional sources. They often use the Web, television, and newspapers as complements to one

another, not replacements. The popular idea of the masses ignoring newspapers and flocking online is therefore false; the real picture is more mixed. Additionally, the Web may actually be helping newspapers to *retain* readers. The Pew researchers noted that most of the loss in newspaper readership between 2006 and 2008 came among those who read print newspapers. According to the researchers, newspapers “would have suffered even greater losses without their online versions” (“Key News...”). The Internet is changing people’s news habits, but to think of it as “stealing” newspaper readers would be an inaccurate oversimplification.

News on the Web—Only for the Educated?

Most of the Net Newsmers and Integrators that the Pew researchers identified were highly educated. Among the college graduates surveyed, 44 percent got news online every day. The researchers also identified a group called the Traditionalists that was very unlikely to find news on the Internet. Traditionalists relied heavily on television news, in part because they could understand the news better by seeing pictures instead of reading or hearing about it. The Traditionalists were notably less educated: 60 percent had no education beyond high school.

The Pew researchers wrote that “the educational divide in online news use—evident since the internet’s early days in the mid-1990s...is increasing.

If highly educated people get news from the Internet much more often than less educated people, how will their understandings of the news differ?

Like the decline in readers, cuts to newspaper staffs began before the Web took off. An article in 1996 noted that so many newspapers had reduced staff or closed in the prior year that “it was as if some creeping, flesh-eating virus had got hold of the

newspaper industry” (Gleick). The emerging World Wide Web was not the sole cause of the sickness. A wide variety of pressures hurt the newspaper business in that year, including new competitors for ad revenue, and the Web was not yet the advertising force it was to become (Gleick). The newspaper industry’s advertising profits lessened even before the Internet was much of a factor. In later years, cheap online advertising kept prices low, reducing the profitability of newspaper ad space (“Newspaper stocks...”). The Internet might therefore have worsened newspapers’ financial difficulties, but the root problems began earlier. Many factors chipped away at the profitability of newspapers and led to staff cuts; the Internet alone is not to blame.

Newspapers do face a crisis, and the Internet has helped to bring it to a head. The traditional advertising-based business model no longer brings in the high profits of the past, and fewer readers pick up print editions. The online editions of newspapers may have helped them to retain readers. However, since most newspaper content on the Web is free, and Web advertising is relatively cheap, newspaper Websites have yet to offset the loss in revenue from the print editions. Classified advertisements, too, have been providing less money for newspapers. The classified section was once highly lucrative, but Websites like Craigslist have claimed much of this business (“Newspaper stocks...”)

The Internet may not be solely responsible for the problems facing newspapers, but it is forcing newspapers to find alternative business models. In the digital age, the old model of low price and high ad revenues can no longer work.

The Future of Professional Journalism

With traditional journalism experiencing hardships, some observers have looked to bloggers and citizen journalists to fill the gap. Even if newspapers die, they argue,

journalism can live on in a different form. Former reporter David Simon summarized this thinking as follows:

There is a lot of talk nowadays about what will replace the dinosaur that is the daily newspaper. So-called citizen journalists and bloggers and media pundits have lined up to tell us that newspapers are dying but that the news business will endure, that this moment is less tragic than it is transformational.

Citizen journalists and bloggers have indeed aided in the newsgathering process, as the examples outlined in this chapter have shown. But a large number of people, including Simon, have justifiable doubts that amateur journalism can successfully fill the void left by the potential decline of professional journalism. [See sidebar, “Slipping Through the Cracks”]

Slipping Through the Cracks

David Simon created an acclaimed television series with *The Wire*, but before that, he was a crime reporter in Baltimore. After a police officer in that city shot and killed a 61-year-old man in February 2009, Simon began to investigate just as he had years earlier. He wrote an article for *The Washington Post* detailing his investigation. As part of the article, Simon explains how staff cuts caused the city newspaper to fail to uncover an important story. The full article, titled “In Baltimore, No One Left to Press the Police” and published on March 1, 2009, is available on the *Washington Post* Website here: <<http://www.washingtonpost.com/wp-dyn/content/article/2009/02/27/AR2009022703591.html?referrer=emailarticle>>

Thousands of professional journalists spend their entire workdays gathering information and writing reports, and without their meticulous research, stories would likely remain hidden. So far, members of the new media—bloggers, Twitterers, citizen journalists, etc.—have not filled the vacuum left by the downsizing of the professional workforce. A survey of Baltimore news coverage from part of 2009 found that an overwhelming 96 percent of original reporting came from traditional media sources, and only four percent from digital-only sources; about two-thirds of original reporting came from newspapers (Fritz). Many bloggers write about the news, but few of them report facts that they uncover on their own; most bloggers depend on traditional news organizations for information. Currently, the organizations that provide facts are declining, even while more and more Web commentators write opinions based on those facts (“About Us”). Without professional journalists to gather facts, bloggers would be left with little to discuss.

Independent citizen journalists could do some of the research, but the high cost of newsgathering would limit or defeat many of their efforts. Christine Stuart, known online as the Connecticut News Junkie, is a citizen journalist who spends hours observing and reporting on state government in Hartford. Her Website offers the sort of fact-based news that citizens need to stay informed. However, the Connecticut News Junkie operates under financial hardship. Advertising dollars alone cannot support Stuart, so she works a part time job to make ends meet. Stuart’s site is not the only politically-focused online reporting effort to have struggled monetarily. In early 2008, the Politicker network set up political news sites in 17 states. Within a year, 15 of the sites had closed because of financial problems. For democracy to function, citizens need the sort of

information about government that Politicker and the Connecticut News Junkie have tried to provide. But selling advertisements on such political Websites has proven more difficult than selling ads alongside stories on local restaurants, the arts, and travel (“As Newsrooms...”). On their own, citizen journalists struggle to finance their newsgathering efforts.

Partnerships between professionals and amateur volunteers, along the model pioneered by Off the Bus, could potentially prove more viable. An increasing number of projects combine the publication powers of traditional media organizations with the efforts of citizen journalists and bloggers. The major media organizations distribute the content that the amateurs provide. *The Sacramento Bee*, for instance, announced the launch of a network called Sacramento Connect in March 2010. The *Bee*'s Website will be linked to blogs and sites that provide local coverage through original reporting and citizen posts. *The Sacramento Bee* will benefit by engaging more with visitors to its site and selling advertising on its portion of the network; the sites to which it links will benefit from increased traffic (Sill). Across the country, *The New York Times* is partnering with New York University journalism students and amateurs in a project dubbed “The Local: East Village.” The *Times* will provide editorial guidance and publish content produced by NYU students as part of a class. The project will also feature content from contributors recruited from the East Village community, such as bloggers, citizen journalists, community leaders, writers, and video artists. The content on “The Local: East Village” Website, to be launched in the fall of 2010, will not attempt to cover the entire city, instead focusing on one section of Manhattan. Previously, *The New York Times* had created Websites focusing on coverage of Maplewood, Millwood, and South

Orange, New Jersey; and another serving Fort Green and Clinton Hill in Brooklyn (“Explaining the Local...”). All of these projects are part of a movement toward **hyperlocal news**—news that is “relevant to small communities or neighborhoods that has been overlooked by traditional media outlets” (“Your Guide to Hyper-Local-News”). Whether started independently or backed by traditional media organizations, hyperlocal news efforts try to cover news that matters to people within particular communities, rather than trying to serve an entire city or entire region with the same coverage. Major news organizations have created hyperlocal sites in the hopes of engaging readers and creating a market for niche advertising (“Your Guide to Hyper-Local News”). Small businesses that do not see benefits to advertising in the major city paper might consider advertising on a site dedicated to their particular neighborhood. Hyperlocal news thus gives media organizations hope for a new source of revenue, as well as a way of bringing in and retaining readers. Many hyperlocal efforts rely on amateur contributions, sometimes selected or overseen by the traditional media organization. Like *Off the Bus*, these projects show how citizen journalists working with professional journalists might be able to provide valuable news coverage, without requiring a fully-staffed newsroom of professional reporters.

Nonetheless, with news organizations eliminating so many jobs, the future of journalism is clouded. Nearly everyone agrees on the importance of professional journalists, but no one knows yet how the professionals’ future efforts will be paid for. People are looking for a solution to the problem, though, and recent ideas and experiments have revealed some possible paths that news organizations might take.

With the collapse of the advertising-based business model, some newspapers and magazines have been seeking more money from subscribers. The old practice of keeping prices low to increase circulation—and make the publication more attractive to advertisers—is giving way to a model using higher prices. *USA Today*, for one, raised its price for the print edition of its paper. In six months, the paper lost 390,000 readers. However, the higher price meant that *USA Today* still made just as much money as before. In similar moves, the magazines *Newsweek* and *Reader's Digest* cut their numbers of subscribers by more than 30 percent. Other mass market publications are likely to follow suit (McIntyre). But not all newspapers will benefit from this strategy. Circulation numbers reveal that when some newspapers have raised prices, many readers give up the print edition in favor of the free version online (“Newspaper stocks...”). Raising prices might actually worsen the financial problems of some newspapers.

Newspapers have also explored ways to get revenue by charging for material on their Websites. Some editors have come to think that giving away online content, and focusing solely on audience size, was a mistake. Instead, they believe that a successful digital business model should bring in money from users as well as advertisers (Weisberg). Several newspaper editors talk of establishing **pay walls**, restrictions that prevent Internet users from viewing content unless they pay a fee. Pay walls might drive some users away, but could also bring in more revenue. In order to find the proper balance, publications might erect partial pay walls. Newspapers could pinpoint what content users are willing to pay for, charge for it, and keep the rest of the Website free to draw in new users. *The Wall Street Journal* already follows this model (“Four observations...”). In spring 2009, *The New York Times* discussed instituting a “metered”

system, under which a reader who clicks on a certain number of stories on the *Times* Website will have to pay a fee for further content (Koblin). At the start of the following year, the paper announced that such a metered system would be in place starting in January 2011 (“The Times to Charge...”). Critics of the upcoming policy fear that limited access to *Times* content will limit the paper’s influence, turning one of the nation’s dominant newspapers into a niche product. The *Times*’ columnists and bloggers, in particular, stand to lose readers and influence if the paper leaves them behind the pay wall (Coddington). On the other hand, this system could keep casual readers on the site and still let newcomers become familiar with *The New York Times* online, but also bring in revenue from readers who use the site frequently. The heaviest users are likely more willing to open their wallets for it. Following similar reasoning, other newspapers have attempted to entice online visitors who will pay for special features. The *Pittsburgh Post-Gazette*, for example, offers a “PG+” section of the Website for a monthly fee. PG+ promises more interaction with staff members, more blogs, more community features, and more in-depth coverage of the city’s popular football and hockey teams (“PG+”). While the methods of these plans vary, all of them hope to make Websites profitable by breaking away from the previous approach of making everything online free.

A few publications have erected pay walls not out of desire to get money from their Websites, but in the hopes of driving customers back to the print edition. Physical newspapers still account for 80-90 percent of most newspaper companies’ profits, so print customers are more valuable than Web visitors (“Four observations...”). With this in mind, *The Newport Daily News* in Rhode Island introduced a new pricing structure. Home delivery of the print edition cost \$145 per year. Home delivery plus access to the

online edition cost \$245 per year, and access to *only* the electronic edition cost \$345 per year. While some online content remained free, such as blogs, obituaries, and wedding announcements, the higher prices for the Website forced customers back to print. The Website got fewer visitors, but in the words of publisher Albert K. Sherman, “The people we hired to sell advertising on the Internet just never did very well,” so the paper lost little money from online operations (Delaney). Meanwhile, sales at newsstands increased by about 200 per day—a significant number for a small paper with a circulation of 13,000 (Roberts). The Newport plan worked. On Long Island, *Newsday*, the dominant newspaper, has decided to follow a similar strategy. Access to its Website is free to the company’s newspaper and cable subscribers, but costs others \$260 per year. Announcing the plan, the managing editor explained, “We do expect that our overall traffic is going to decrease, because we’ll have fewer out-of-area visitors accessing the site, but what we’re really focused on is our local audience” (“Newsday to Charge...”). It is that local audience, after all, that provides the most revenue. Pay walls might help some newspapers to pull local readers back to the print edition.

The success of a pay wall at one or two newspapers does not, however, mean that the pay wall is the answer to every newspaper’s woes. One solution does not fit all. *The Newport Daily News*, for example, had two notable advantages that aided its pay wall scheme. First, it faced only limited competition. The larger *Providence Journal* had reduced its statewide coverage, so the *Newport Daily News* was the only organization doing significant coverage of Newport County. When the pay wall went up, readers had no choice but to turn to the print edition of the *Daily News*. Second, even before the pay wall, the paper provided only a limited selection of stories on its Website. Customers did

not expect everything to be free, so the pay wall did not require as much adjustment as it would at other papers (“Four observations...”). Newspapers that attempt to use the strategy of the *Newport Daily News* without these advantages might be less successful. And even if a pay wall works in the short term, it might not guarantee the long-term health of the newspaper. According to Zachary M. Seward of the Nieman Journalism Lab at Harvard, pay walls are only “stopgap measures” to deal with a “very specific financial situation” in which newspapers find themselves. Even if pay walls prove to be the future of newspapers, Seward writes, “they are not the future of news” (“Four observations...”). With print readership in a longstanding decline, newspapers’ survival in the coming decades might well depend on building an online audience (Twarowski 4). Papers like *Newsday* that establish pay walls might seal print subscribers in, but they are also sealing online readers out. After three months behind a pay wall, *Newsday* had signed up a grand total of 35 online-only subscribers (Twarowski 3). While the company’s strategy had always been to encourage customers to subscribe to its cable service and newspaper, 35 is nonetheless a staggeringly low number (Twarowski 4). With thousands of non-subscribers on Long Island—not to mention elsewhere—such a small figure means that the newspaper could be reaching many more people. The company is betting on its current products rather than cultivating a digital news audience (Twarowski 4). Journalism will continue to evolve. If newspapers insist on prioritizing print editions and maintaining the same practices as in the past, they are likely to fall away from the forefront of the news industry.

Some newspapers have embraced the electronic format and hope that it, not a physical edition, will provide the most revenue in the future. After the *Seattle Post-*

Intelligencer lost \$14 million in 2008, the newspaper ceased publishing a print edition in March 2009 (Richman). Owners cut the staff down 80 percent, leaving just 20 “newsgatherers” in place of the former reporting staff (Kafka). The remaining staff focused on turning the newspaper’s Website into a “community platform” with breaking news, columns by prominent city residents, photo galleries, citizen bloggers, and more (Richman). In April 2009, the first full month of revised operation, the *Post-Intelligencer* Website attracted more visitors than it did the previous April, when a fully staffed newspaper was behind it. The company found these results to be an encouraging sign for the Website’s future (Kafka). But with a drastically reduced news staff, the new *Post-Intelligencer* cannot be expected to produce the same quality reporting as its former version. Electronic-only publication by a smaller staff is preferable to the organization closing entirely, but it is hardly an answer for the broader newspaper industry.

Electronic editions may become more profitable as electronic readers like Amazon’s Kindle grow more popular. By the end of 2009, Amazon listed 89 newspapers as available on the Kindle via subscription. The option to receive a newspaper electronically could lead more people to purchase it. More importantly, digitally delivering the newspaper does not require money for paper, ink, or delivery services. Each subscriber who chooses to receive the newspaper on an e-reader therefore saves the newspaper money. In fact, a writer for Business Insider estimated that for roughly *half* of its annual printing and delivery costs, *The New York Times* could purchase a Kindle for every one of its subscribers (Carlson, N.). Publication on e-readers could save newspapers millions of dollars. As e-reader screens grow closer to replicating the

appearance of ink on paper, and as e-reader displays grow larger in size, they are likely to have a big part in the future of the news (Skowronski).

Some observers have suggested that newspapers, unable to find a viable business model, will pay for future operations through charitable donations. Universities already fund themselves in this way, depending on the philanthropy of wealthy individuals and others who donate smaller amounts. With sizable charitable endowments to fund their efforts, newspapers could maintain their independence in the same way as universities (Weisberg). Combined with income from advertising and subscriptions, endowments could help to create a workable business model for a non-profit newspaper (Johnston). Such funding would not be so foreign to the American media industry as it may seem. In decades past, many newspapers sustained robust operations because the rich families and individuals that owned them viewed the newspaper as a public trust. These owners allowed many expenses that ate into the newspapers' profits, but that enabled the newspapers to do reporting that benefitted the public (Weisberg). While the newspapers were run as profitable businesses, the owners also viewed them through philanthropic eyes, considering the public good as well as the balance sheet. With profitability now declining, a move toward philanthropy and a non-profit model could enable some newspapers to maintain their level of reporting.

Already, philanthropy funds the non-profit Pro Publica Corporation that provides free **investigative journalism**—journalism that seeks to uncover matters that are important to the public, but that the involved parties would prefer to keep secret [*see "Death on the Tracks" sidebar*] (Houston viii). A charitable organization has paid for Pro Publica's newsroom of 32 journalists, all dedicated to investigative journalism.

Rather than profiting through publication of its stories, Pro Publica makes them available to other news organizations free of charge (“About Us”). Pro Publica hopes to fill the gap that has developed in investigative journalism as newspapers cut costs (Weisberg). The investigations necessary to uncover some stories can prove very expensive, as the organization’s Website explains:

More than any other journalistic form, investigative journalism can require a great deal of time and labor to do well—and because the “prospecting” necessary for such stories inevitably yields a substantial number of “dry holes, i.e. stories that seem promising at first, but ultimately prove either less interesting or important than first thought, or even simply untrue and thus unpublishable. (“About Us”)

Because of the cost of investigative work, many news organizations have trimmed funding for it to save money. A 2005 survey by Arizona State University provided evidence of the decline. The hundred largest U.S. newspapers received the survey, and of those that responded, 37 percent had no full-time investigative or projects reporter on staff; a majority had two or fewer. The survey also found that investigative reporters were given less time and fewer resources than they had in the past (Ide). The Pro Publica newsroom hopes to make up for losses elsewhere through its dedication to investigative journalism. The organization’s partnerships with newspapers have led to major stories in *The Los Angeles Times*, *The Times-Picayune* of New Orleans, and *The New York Times*, among others. In April 2010, Pro Publica was awarded a Pulitzer Prize (Susman). In the

future, philanthropically supported organizations like Pro Publica could fuel journalism even as more traditional news organizations decline.

“Death on the Tracks”: Investigative Journalism at Work

The New York Times received a prize in 2004 for one example of investigative journalism. A team of reporters researched and wrote a series of stories titled “Death on the Tracks: How Railroads Sidestep Blame.” They found that railroad companies were avoiding responsibility for deaths at railroad crossings. The companies described in the articles ignored laws requiring them to report fatal accidents to the federal government, failed to correct the dangerous hazards, and sometimes went so far as to destroy evidence indicating that the railroad companies were at fault.

After the newspaper published its series of articles, the companies corrected the hazards, and federal authorities tightened restrictions on accident reporting procedures.

The stories are available on *The New York Times* Website.

SOURCE:

Ide, Chelsea and Kanupriya Vashisht. “Today’s investigative reporters lack resources.”

[AZCentral.com](http://www.azcentral.com). Published May 28, 2006.

<http://www.azcentral.com/specials/special01/0528bolles-stateofreporting.html?&wired>

The Website Spot.Us offers another model for supporting news reports through donations. Reporters can use the site to describe projects and ask Web visitors for funding. The reporters can post video and text explaining the proposed story, how they plan to publish the results, and how much money they need to complete the story. Visitors to the site can pledge \$20 or more to fund the reporters’ work. Instead of having

one news organization pay expenses, a reporter might have dozens of individual backers, as Lindsey Hoshaw did. Hoshaw requested funds to go on a reporting trip aboard a research vessel going to the Pacific Ocean. The ship was bound for the Great Pacific Garbage Patch—a section of ocean roughly twice the size of Texas and full of swirling plastic trash. Hoshaw wanted to produce a multimedia slideshow and an article about the pollution for *The New York Times*. The *Times* offered \$700 for the slideshow: the trip cost \$10,000 (Hoyt). Needing to cover the expenses, Hoshaw posted a request for funds on Spot.Us. She eventually raised more than \$9,000. While on the voyage, Hoshaw sent blog updates to Spot.Us using a satellite Internet connection, keeping donors and others up-to-date on her efforts (“PITCH...”). Her article about the pollution appeared in *The New York Times* print edition and online, under the title “Afloat in the Ocean, Expanding Islands of Trash” (Hoshaw). Donations by a crowd of people made the story possible, showing the practicability of a model that could fund numerous reporting efforts in the future.

Regardless of how it is paid for, professional journalism will remain important in the future. As reporter Daniel Froomkin explained,

As long as human beings are curious about each other and clamor for trusted information, there’s a place for us out there. The Internet hasn’t changed that. In fact it’s increased the market for what we’ve got: The Internet highly values people who know things, who can find things out, who can distinguish between what’s important and what’s not, who can distinguish between what’s true and

what's not, and who can communicate succinctly and effectively.

The news business has undergone radical changes and will continue to evolve rapidly, but the news must go on.

Got Some Time?

Check out the proposed stories currently seeking money at www.spot.us. The site's efforts are currently based in California, but may spread to other regions in the future.

The page containing Lindsey Hoshaw's pitch for the Great Pacific Garbage Patch story is available at <http://spot.us/pitches/238>.

Conclusion

People have been able to access news on the Web for about 15 years, and journalism has changed significantly during that time. At first, news organizations treated their Websites as sideshows, but online operations have become integral to many organizations. The line between print staff and Web staff has widely disappeared, and most newspapers no longer hold back original reporting to favor their print editions. Blogging, too, has become a regular part of most news organizations, and of journalism as a whole.

Bloggging, news aggregation, and citizen journalism are here to stay. Questions still exist, though, about what impact they are making and how they will help or harm professional journalism. Professional journalism itself seems to be at risk, as Internet publication has not brought the revenue that news organizations had hoped for in the mid-

'90s. The media is in a time of transition, both in how reporting is done and in how reporting is financially supported.

The four principles discussed in Chapter One have affected journalism in significant ways.

1. The Internet accelerates the speed with which information can be accessed and transferred.

The Internet has accelerated the pace of the news. At first, news outlets withheld their original reporting until after print editions or broadcasts were released. But as they adapted to the online medium, news organizations began posting stories around the clock, with Web updates coming just minutes after major news broke. On the plus side, this frenetic pace allows the audience to know what is happening when it is happening. On the minus side, reporters trying to keep up with the 24-hour news cycle sometimes post incompletely researched stories. Furthermore, with fresh stories constantly pushed into the headlines, the audience is less likely to follow important stories to their conclusions.

2. The Internet connects people and organizations.

Before the Internet, most people could access the work of only a few different news organizations. Now, with thousands of news Websites available, people can access news from outlets all over the world. For the audience, this means more choices. For the news organizations, this means more competition.

The Internet has changed the flow of communication in the news industry. For many years, the media communicated information to the audience, but the audience only had very limited ways of responding. The Web has brought about tools that fundamentally changed the connection between the audience and the media.

Communication has become a two-way street; audience members can easily use their connections to the media to interact with news organizations, perhaps influencing them.

Blogs have become an especially dynamic force in drawing people together.

Many bloggers interact extensively with their readers, which benefits both. In the case of Talkingpointsmemo and the U.S. attorney firing scandal, the connections between blog readers and bloggers led to the uncovering of a major scandal. By pulling individuals together, blogs and other Web tools can bring the “wisdom of the crowd” to the news. In turn, reporters at professional news organizations can consult blogs, getting information and ideas for stories. The flow of news among many different people, all participating in the news process, has the potential to enrich journalism.

3. The Internet enables anyone to publish content.

Once weblogging software gave everyday people the power to publish online, the news business changed forever. Individuals could become reporters and publishers of the news, reaching a mass audience without the high costs of printing or broadcast equipment. This opening-up makes journalism more democratic and allows more people to offer their research and expertise on the stories of the day, as the controversies over the Trent Lott remark and the Bush National Guard memos demonstrated. However, many in the mass of people writing about the news are not trained journalists. Not only can bloggers make mistakes, but most of them write commentary upon news stories without presenting original news. The huge number of amateurs publishing news content have not, so far, made up for decreases in the number of professional reporters. Still, partnerships between professionals and amateurs have led to fruitful news stories, as shown by Off the Bus and several hyperlocal news projects.

Twitter made the communication of news even easier. Anyone with a cell phone can easily post words or pictures. In the past few years, witnesses on the scene have used Twitter to give real-time accounts of an attack by gunmen and to share dramatic photographs of a downed plane. In contrast, in the past, reporters would write about the witnesses' experiences after the fact. Twitter users can report breaking news on their own faster than news organizations can publish it. However, Twitterers might also spread false information, either through errors or outright lies.

The capability to publish information easily has also enabled people to offer specialized news for audiences with particular interests. The increase in news sources means that individuals with varying political beliefs, hobbies, and attitudes can all seek news written to appeal to them. While many people see such choices as a benefit, the audience fragmentation that results can foster misunderstanding between people who already hold different ideas. For news organizations, audience fragmentation can also hurt their audience size if people turn to their preferred news sources instead of the traditional media.

4. The Internet drives businesses to adopt new models for making money.

Prior to the explosion of the World Wide Web, newspapers had followed the same business model for more than a century—sell papers below cost, then rake in money through advertising. News organizations attempted to follow the same basic model on the Web, making the news free. But since online ad prices remained much lower than print ad prices, news Websites never became the cash cow that the organizations had hoped for. Newspapers currently face financial pressure due to a number of factors—the growth of the Web among them—and have been searching for paths to financial stability

in the Internet age. Various publications have raised prices and cut readership, changing the long-standing business model of journalism; erected pay walls to guard online content from free access; and eliminated print editions to focus on the Web. Others seek cost-efficient partnerships with amateurs. Some people believe that future news organizations will depend on donations to fund their efforts, as with Pro Publica or Spot.Us. However, no one is sure what the coming years will bring. No single business model has emerged as a winner that can “save” professional journalism, and it is possible that none will. The time may be over when newspapers could uniformly depend on the same reliable business model.

Besides changing the newspaper industry, the expansion of the Web led to a new kind of media business: news aggregation. With thousands of news organizations publishing hundreds of thousands of stories online, the common reader could not sort through them all. News aggregators began examining Web news to find items of interest for readers, helping with the selection process. The aggregators then made money by selling advertisements alongside article links. Supporters believe that aggregators help news organizations by linking readers to their sites, but critics charge that aggregators unfairly profit by selling advertising beside someone else’s reporting. In the near future, some news organizations are likely to seek what they consider their “fair share” of the aggregators’ income. The business model of aggregation is thus in flux.

Key Terms

24-hour news cycle—term used to describe the continuous reporting of the news.

audience segmentation—the breaking up of the mass audience into numerous smaller audiences, each seeking its own type of content.

hyperlocal news—news relevant to small communities or neighborhoods that has been overlooked by traditional media outlets.

investigative journalism—journalism that seeks to uncover matters that are important to the public, but that the involved parties would prefer to keep secret.

news aggregators—sites that collect news from many Websites to present to readers, drawing attention to items of interest.

objectivity—freedom from personal feelings and interpretations.

pay walls—restrictions that prevent Internet users from viewing content unless they pay a fee.

press release—a written or recorded announcement of information directed at the media.

selective exposure—the tendency for individuals to expose themselves to communications that agree with their existing attitudes and avoid communications that do not.

Review

1. Explain the basic business model that newspapers traditionally followed. Then, explain why newspapers have questioned the application of that business model to the Web.
2. What factors held back online news reporting in its earliest years?
3. In what ways has the 24-hour news cycle harmed the quality of journalism?
4. What did the Trent Lott scandal reveal about the potential for bloggers to contribute to journalism?
5. What made the coverage of the 2004 tsunami a significant milestone in journalism?

6. Describe the Off the Bus organization and the work it did during the 2008 presidential election.
7. List three statistics demonstrating the declining amount of news coverage offered by newspapers.
8. Explain the pros and cons of putting newspaper content behind a pay wall.
9. Describe the mission of Pro Publica and its business model.

Discussion

1. Do aggregators do more to help or harm news organizations? How should the practice of news aggregation be reformed, if at all?
2. The *Guardian*'s project investigating parliamentary expense reports and the Off the Bus initiative offer two different models for how citizen journalists can make meaningful contributions to the news. How are they similar, and how are they different?
3. Disprove the following statement: "The news industry was doing fine before the Internet killed it."
4. What role can citizen journalists play in the future of the news? To what extent can they compensate for the loss of professional journalists?
5. How can newspapers best position themselves to survive while still providing quality journalism?

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CHAPTER TWO: RESEARCH, CREDIBILITY, AND WIKIPEDIA

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