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Multimedia in the Mainstream
Analyzing Legacy News Traditions in Online Journalism

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Abstract

Multimedia in the Mainstream
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Newspapers, radio stations, and television stations are balancing the demands of a legacy product with the demands of putting material on the Web. Today information can be conveyed in multiple content forms—text, images, sound, motion, graphics—and received by the consumer through multiple modalities—seeing, hearing, reading. It is the combination of these content forms that allows producers to create multimedia presentations for an audience previously limited to the narrower choices offered by legacy media. *The Spokesman Review*, *The Roanoke Times*, *The Detroit Free Press*, *The New York Times*; CNN, MSNBC, News10 (Syracuse, NY), KGW (Portland, OR); NPR, KCBS (San Francisco) and NHPR (New Hampshire) are the subjects of a content analysis examining the formats and characteristics of these multimedia presentations. These news entities are putting multimedia content to work on websites, but often rely heavily upon and therefore reflect their textual, visual or aural heritage. This “legacy effect” can be an asset or a detriment to a news organization depending on the attitudes of producers and managers.

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DEDICATION

To Gail L. Achterman
1949-2012

Extraordinary sister and cheerleader.

CHAPTER ONE

INTRODUCTION

Legacy¹ media—pre-digital media such as print, radio and television—produce most of this nation’s news coverage. Until the late 1990s, they carried out their work without fundamental changes in the ways they traditionally constructed and distributed their messages: newspapers printed text and still photographs; radio transmitted audio; and television broadcast video with audio. Today, through expansion to the Web, these legacy media have opportunities to produce and distribute information in new ways. Tom Kennedy was Managing Editor/Multimedia for the Washingtonpost.com in 2003, and explained:

The Internet permits us to blend still photographs with audio, text, video, and databases to make compelling content that is far richer than print or broadcasting typically deliver. This new world of visual storytelling gives us a chance to reinvent the form and to adapt integration of various media types to tell the most compelling possible story (2003).

Telling that compelling story online is challenging mainstream media companies to leave their comfortable traditions of print and broadcast behind and contribute to creating something new in journalism—the ability to produce multimedia presentations. This is a rare point in history, sometimes compared with the radical social change pushed forward by the advent of the printing press.

¹ Jakob Nielsen first coined this phrase in 1998, but it came into more common usage when Jay Rosen used it in a title for an entry on his website PressThink in 2004 (Nielsen, 1998; Rosen, 2004). The term “mainstream media” has also been used extensively, but prior to about 1995 it was used to distinguish between the traditional and alternative press. Lately scholars and professionals argue that news-via-the-internet is in fact “mainstream,” and therefore legacy is a more appropriate term to describe print, radio and television in their 20th Century forms.

Historians of the printed word invoke the term *incunabula* or “cradle” to signal the shift from handwritten to printed material in the 15th Century (Orita, 2004). This period stretches roughly from Gutenberg’s first use of the printing press in 1439 to about 1500—a span of time suggested by German philologist Bernhard von Mallinckrodt (Eisenstein, 1979). Those who are studying the shift from printed information to digital information might say we are in a transitional period just as radical as that started by Gutenberg’s invention (Crosbie, 2006; Winston, 1998). It is difficult to pinpoint the beginning of the current transitional period because we are likely still in the midst of it, and it may be years until historians can fix its starting point. But even if one chooses the emergence of the World Wide Web in the early 1990s and assumes that technology is advancing at much faster pace in the 21st Century than in the 15th Century, the *incunabula* period for digital media has barely reached a midpoint.

Parallels are emerging between today’s media transformation and the transformation surrounding the spread of the printed word. As in the 15th Century, new communication technologies are revolutionizing the way news and information are produced and distributed. Even the death knells sound the same and come with some of the same ironies. In 1492, Johannes Trithemius, the Abbot of Sonheim, made an impassioned plea to save the tradition of hand-reproduction by scribes even as movable type printing became more common. But in order to disseminate his views widely, he had the work printed. Similarly, as newspaper publishers and broadcast general managers proclaim that their industry is in crisis, they distribute laments via the Internet (Shirky, 2008).

The modern title given to the current transformation is convergence. This

digital merger of communication has been predicted for more than 30 years, but with the growing delivery of multimedia presentations to both desktop computers and pocket devices, it is widely accepted that convergence has actually arrived (Jenkins, 2006). Today information on the Web can be conveyed in multiple content forms—text, images, sound, motion, graphics—and received by the consumer through multiple modalities—seeing, hearing, reading. It is the combination of these content forms that allows producers to create multimedia presentations for an audience previously limited to the narrower choices offered by legacy media.

While the traditional conventions of journalism — ethical reporting, trustworthy sourcing, and solid storytelling — are as important in multimedia presentations as they are in traditional distribution, how do the roots of traditional practice impact the multimedia on these websites? This research seeks to answer that question—that is, whether legacy news media are relying on traditional storytelling tools and practices in producing multimedia content for distribution on the web or through other digital “products.” At its best, journalism’s traditional approaches to storytelling showcase the talents of the photojournalist who captures the perfect moment or the radio reporter who chooses the key sound bite. But reliance on these traditional approaches could, at the same time, discourage journalists from using all the storytelling tools at their disposal in creating multimedia content.

This study relies on two research methods. I use quantitative content analysis to examine the multimedia presentations of 11 legacy news media organizations recognized for exemplary multimedia work. I followed the content analysis by conducting semi-structured interviews with journalists and news managers who were involved with

multimedia production at those organizations.

In the broadest sense this research adds to the work of those who have explored innovation in tradition-bound businesses (Barley & Tolbert, 1997; Rogers, 1995). More specifically, it asks how the standard practices and patterns of the medium-of-origin are reflected in the multimedia presentations these media produce for websites. There has been ample opportunity for newspapers, radio stations and television stations to grow beyond the traditional forms, but the extent to which they have taken full advantage of the capabilities of multimedia remains unexamined.

From a theoretical perspective, the research expands on Pablo Boczkowski's (2004) theory on convergence, which was established through study in three print newsrooms of the late 1990s. His theory proposes that acceptance of convergence, and the adoption of technologies and workflows little known in the newspaper world, is dependent on institutional history and organizational practices. Boczkowski studied the processes at three newspapers as they transitioned from print-only distribution to print *and* online distribution, concluding, "past endeavors influence the present initiatives" (p. 181-182). This research enlarges the scope of Boczkowski's research in the following ways:

- It reaches *across* media to include and compare practices of newspapers, radio stations and television stations. The research of Boczkowski and others tends to focus primarily on a single type of legacy news media (Bergland, 2008; Dibeau & Garrison, 2001; Greer & Mensing, 2004; Massey, 2004).
- It considers Boczkowski's work in light of ten years of further change in the news media industries. His discussion of three news organizations was necessarily

- narrow since there were not significant numbers of media outlets producing multimedia presentations in the late 1990s. Expanding this research to 11 organizations representing the three traditional media types provides a far richer assessment of the influence of organizational traditions and structures on the multimedia presentations now being produced on legacy news media websites.
- It offers a new methodological approach to content analysis specifically designed to look at multimedia presentations on legacy news media organizations' websites. Earlier studies have concentrated primarily on the presence or absence of various types of multimedia presentations or interactivity within multimedia presentations (Bergland, 2008; Seelig, 2008a). None have examined the specific content modes (e.g., text, still images, recorded sound, motion, animation), formats (e.g., audio slideshows, video, interactive presentations) or characteristics (e.g., length, use of a studio, use of a reporter, use of narrator, and so forth), contained *within* the multimedia presentations. A goal of this methodological exploration is to provide tools for further study of specific news organizations or for longitudinal studies of multimedia presentations.

With the decline of traditional media being forecast by so many (Gillmor, 2008; Jarvis, 2009; Jenkins, 2006; Rosen, 2006), this research also produces practical information for legacy news media organizations seeking to maximize multimedia presentation capabilities by addressing the following questions:

- Given the evidence that the news audience is increasingly consuming information via the Web, are legacy media news organizations fully exploiting the new multimedia presentation capabilities with an online presence. If they *are*

embracing these new storytelling practices, how does it show in the multimedia produced (Purcell, 2010)? If they are not, can correcting these weaknesses help these legacy news media organizations survive? Do legacy news media organizations still use the majority of human and financial resources to produce the print or on-air products? If they do, does that restrict growth on the website or does it add to the website?

- How is multimedia presentation production changing newsgathering practices? Are print reporters now carrying video equipment? Are radio reporters shooting photographs? Is the opportunity for multimedia presentation changing the way news stories are assigned and what supervisors expect a journalist to gather when on assignment?
- Does news staffing change when an organization embraces the production of multimedia presentations? If so, how can those changes in practice be communicated to staff in order to “bring them on-board” in contributing to the multimedia presentations?

The fundamental purpose of this research is to understand how the traditional production techniques of legacy news media organizations shape the characteristics of today’s multimedia presentations on websites. The research took place in two steps; first, a quantitative content analysis was conducted of the multimedia presentations of 11 legacy news media organizations of varying size—four newspapers, three radio stations² and four television stations. The content analysis examined the multimedia presentation formats and characteristics on these 11 websites. The results of the content analysis

² The radio category did not have a qualifier in the “large” division.

provided the foundation for the qualitative phase of the research in which multimedia producers and legacy news media managers were interviewed. This second stage of the project consisted of semi-structured interviews with journalists and news managers from 10 newsrooms at these legacy news media organizations. The goal was to determine how legacy news media organizations integrated multimedia production into the workflow; how the staffs' educational backgrounds and training influenced multimedia production; and how the organizations anticipate changing multimedia presentations in the future. The interviews also provided a means of sharing some of the results of the content analysis with legacy news media managers, producers, and journalists in order to elicit their responses to the findings. These primary interviews with those directly involved in multimedia production also led (through a snowball sample) to 13 more interviews with opinion leaders in multimedia production.

This study found that legacy news media organizations do, indeed, rely heavily on what is known and on traditional methods of production. Television websites depend on video from broadcasts, radio sites depend on audio, and newspapers favor still images and text even in the most innovative interactive presentations. Traditional practices of legacy media are carried through to multimedia presentations, thus producing what could be termed a "legacy effect." Even in presentation formats that are novel—video presentations produced by newspapers—the legacy old legacy practices are still apparent.

Interviews with key players involved in the production of multimedia presentations revealed high levels of frustration in this transition to digital production and distribution, but also a hopefulness in the ability to create new ways to tell a story. Legacy news media managers were optimistic about the storytelling potential but are also

realistic about the dedication of resources to something that has yet to make a consistent profit. All are honest about the uncomfortable balance between the moneymaking legacy news product and the exciting, but potentially costly, online product.

The dissertation is organized into five chapters following this introduction. Because the definition of the multimedia has changed rapidly throughout several disciplines, Chapter 2 provides an outline of previous literature on multimedia and the historical use of this term in education, business, fine art, computer science, and information science. It then moves to the specific definitions of multimedia in the study of online journalism and places this research within that framework. Key terms used in multimedia research are then defined and developed to provide a structure for the study. Finally, the chapter presents specific hypotheses regarding the use of multimedia presentations by newspaper, radio and television news organizations today. Chapter 3 details the methodology created to explore and capture the attributes of multimedia presentations on newspaper, radio and television websites. This chapter offers examples of the modes, formats and characteristics that make up multimedia presentations and provides the steps taken to develop and carry out the content analysis. The quantitative results of the content analysis comparing similarities and differences of the multimedia presentations of newspaper, radio and television websites are reported in Chapter 4. The qualitative portion of this dissertation is presented in Chapter 5: It first outlines the multimedia literature concerning newswriters and changes experienced as they adapt to online presentation, and then reports the results of the interviews conducted with multimedia producers, managers and experts. Finally, Chapter 6 discusses how the combined findings contribute not only to multimedia scholarship, but provide legacy

news media organizations with a better understanding of how they can move forward in a fast-changing news environment. It also offers ideas for further study of multimedia and its impact on legacy news media organizations and news consumers.

CHAPTER TWO

LITERATURE REVIEW JOURNALISM AND MULTIMEDIA

As journalism moves from the printed page and airwaves to computer monitors connected by broadband, it is widely presumed that storytelling will take advantage of the tools offered by distribution on the Web (Gates, 2002; Gitner, 2009). Legacy³ media—newspapers, radio and television—are expected to produce what they have always produced—a publication delivered to the doorstep or a news report at five o’clock—but they must also have an online presence. Google and YouTube have taught the audience that not only can they read about an event, but they can *see* it and *hear* it and often interact with it in some way via the Web. This chance to experience a story in a new way is often called *multimedia storytelling*. For the last two decades journalism scholars have attempted define multimedia, to quantify its use, and to measure its impact on content producers and audience (Steensen, 2011). The results of these studies paint a complicated picture of the new media landscape. This chapter traces the historic use of the term multimedia through several disciplines outside of media, providing a baseline for the definition of multimedia in journalism. Multimedia research specific to journalism is then reviewed through four distinct eras. Finally the chapter will specify the key concepts used in this study and the hypotheses that guided the content analysis.

³ Jakob Nielsen first coined this phrase in 1998, but it came into more common usage when Jay Rosen used it in a title for an entry on his site PressThink in 2004 (Nielsen, 1998; Rosen, 2004). The term “mainstream media” has also been used extensively, but prior to about 1995 it was used to distinguish between the traditional and alternative press. Lately scholars and professionals argue that news-via-the-internet is in fact “mainstream,” and therefore legacy is a more appropriate term to describe print, radio and television in their 20th Century forms.

DEFINING MULTIMEDIA

The use of the term multimedia dates back to the 1960s, long before the advent of online communication (Kelly, 2007; Mayer, 2001). From the beginning these definitions focused on the use of multiple sensory modalities (seeing, hearing, reading) through different content modes—text, still images, recorded sound, video, graphics, computer animation—but a more exact definition is necessary for journalism research (Boiko, 2002).

Multimedia Definitions Across Disciplines

Multimedia is broadly defined across fields of study and production. In education and business, multimedia was initially seen as a way to enhance learning by appealing to the different senses of the receiver (Feldman, 1997; Mayer & Moreno, 2003; T. McAdams & Duclos, 1999). For example, a teacher might provide students with both a reading and a film on a topic. As multimedia came into common use within the fine arts, computer science, technical communication and information science, the definition applied strictly to the production of content (Lee, 1999; Peck, 1998; Rahman, Sarker, & Bignall, 1999; Wilson, 1993). If an art installation used video *and* dancers it was called multimedia. Merging the modalities of seeing, hearing and reading and presenting them in the content modes of text, still images, recorded sound, video and graphics is one broadly accepted definition of multimedia (Kress & Van Leeuwen, 2006),

Education: The concept of delivering information via more than one medium has been at work in education since teaching began, but more formally in the United States following World War II and the prioritization of education during the Cold War (Mayer,

2001). Studies showed that students learn differently, so educators started to present materials in alternative modes, tracking progression through various studies of knowledge retention (McKeachie, 1978). In the 1970s educational publishing produced “multimedia kits” that typically combined workbooks, filmstrips, audiotapes and photographic slides. These offered a variety of media delivered in forms beyond the printed page (Feldman, 1997).

Richard Mayer is often quoted in the realm of multimedia and its use in educational environments. Along with his coauthor Roxana Moreno, he draws distinctions among three commonly used definitions of multimedia within the education field: multimedia can be defined in terms of sensory modalities (e.g., visual vs. auditory), representational modes (e.g., pictorial vs. verbal), or delivery media (e.g., screens vs. speakers) (Mayer & Moreno, 2002). Within education, discussions of multimedia are not necessarily linked to the computer nor do they demand information be delivered digitally. While primarily concentrating on the effects of multimedia on student learning, the education literature does provide a beginning for a simple definition of multimedia as the combination of words, sounds, and pictures in order to provide more rich and varied lessons.

Business: In business and industry the term multimedia once referred simply to the use of two or more forms of media in the same presentation to colleagues or shareholders. In an advertising agency of the 1960s this might have been a storyboard for a proposed television commercial. Even before the advent of the World Wide Web, computer programs such as PowerPoint provided the user with new ways to display and animate graphics and photographs (T. McAdams & Duclos, 1999).

Today, most people in business and industrial engineering agree that the common definition for multimedia is the computer-mediated combination of graphics, text, sound and video in various arrangements to provide information to the user. Interactivity is not required, but is often desired within, say, the manufacturing community (Rahman, et al., 1999). As high-speed connections have begun to penetrate not only workplaces and industry, but also homes, the use of multimedia for retail transactions, virtual trade shows and direct marketing has expanded. The Web has brought about more polished definitions of multimedia within the business world; those definitions remain broad enough to encompass presentations that are developed and controlled by computer, but not necessarily delivered via the Web (Peck, 1998; Wilson, 1993).

Fine Art: The fine arts, and most specifically the visual arts, can claim the oldest references to “multimedia.” This early definition referred to the use of more than one medium to create a single art object: oil paints, watercolor, collage, paper, or photos or other materials were combined to create a new design (Bolter & Grusin, 1999). These pieces could be two-dimensional or three-dimensional; the core of the term lay in the combination of media on one canvas or in one space. As the computer has become a tool for the creation and distribution of art, the definition of multimedia has broadened to include any form of art that can be created and delivered via a personal computer or handheld digital device. This digital art is a natural outgrowth of video and photography, but given its larger audiences via the Web, it is more powerful than any earlier combination of video, radio, TV, film, text, and images (Macko, 1997).

Computer Science and Technical Communication: Not surprisingly, computer mediation is the key component in definitions of multimedia in the worlds of computer

science and technical communication/human-computer interaction. By the late 1990s multimedia was classified by the engineering world as any computer-mediated software or interactive application that integrated text, color, graphical images, animation, audio, and full-motion video in a single application (Lee, 1999). Computer engineering texts concentrate on what must take place in programming code to create multimedia. Often referred to as “rich media transcoding,” it is the conversion that allows several disparate types of media (images, audio, video) to be compliant with various play-out programs (Ferretti, Rocchetti, & Palazzi, 2007). The most common of these programs include Flash™, PowerPoint™, Soundslides™, and Final Cut Pro™.

Feldman’s definition of multimedia (1997) is commonly cited in engineering and technical communication writings: “The seamless integration of data, text, images and sound within a single digital information environment.” Another, from Marty Shelton (1993), defines the concept this way,

... an umbrella term that describes an evolving host of processes under synchronous computer control that integrate in real time various external visual and audio inputs with computer-generated text, graphics, animation, and audio into sight-and sound programs that are transmitted through stand-alone or network-delivery systems” (p. 694).

In this engineering-oriented discipline the definition of multimedia is quite similar to others but the distinction is a central concern for what is happening in the CPU and on the network, rather than to the producer or the user. However, computer control of the content forms is what creates the end product, so it is wise to include these definitions.

Information Science: Librarians and other information specialists have long been concerned with the archiving and retrieval of physical specimens, but today more and

more library content exists *only* in a digital form. The information sciences provide yet another set of definitions for what constitutes multimedia, but are focused on identifying and classifying these media. A set of problems for both information specialists and for programmers working on cataloging information is that of compatibility and functionality in terms of indexing and storage. These researchers begin with a common definition of multimedia: images, video, graphics, music, and speech (Reitz, 2004; Shin, 2008). However, their concern is not with the meaning, message or form of the content, but rather the ability to identify and therefore categorize the content.

As the field grappled with new ways to store and distribute information, the World Wide Web Consortium (WC3) started Multimedia Annotating the Semantic Web Task Force.⁴ Its stated target audience provides further clues to the description of multimedia and also indicates the broad scope of the definition. The Task Force seeks advice from those institutions and organizations with activities encompassing all multimedia, including museums, libraries, audiovisual archives, media production and broadcast industry, and image and video banks (Arndt, Troncy, Staab, Hardman, & Vacura, 2007; Nack, Van Ossenbruggen, & Hardman, 2005; Stamou, van Ossenbruggen, Pan, Schreiber, & Smith, 2006; Van Ossenbruggen, Nack, & Hardman, 2004).

Multimedia Definitions in Journalism

Definitions have evolved over the last decade, but today's producers and scholars now use the term multimedia to describe something unique to digital content delivery and quite different from the traditional combinations of text, photographs, video and graphics

⁴ (<http://www.w3.org/2001/sw/BestPractices/MM/>).

delivered via the legacy media of print or broadcast. The following is a brief overview of several studies that specifically define multimedia in the context of journalism.

In a study of what they call “traditional news media,” Jankowski and Van Selm (2000) note that online media can produce a “multimedia environment” that includes text, multi-color graphics, and audio and video clips. They are optimistic about the online future of legacy media. “Online publishing can, in other words, mean release from these restrictions for both print publication and broadcasting” (Jankowski & Van Selm, 2000, p. 89). Around the same time Schultz (1999) analyzed the websites of 100 U.S. newspapers and their various levels of interactivity. His definition of multimedia—sound files, video files, animated graphics, or a combination of these—narrowed the definition a bit more, but found fewer than 17 of these papers carried any multimedia presentations. Another study in the late 1990s defined multimedia use in several English-language publications in Asia as “any digitized audio and video of news or entertainment events” (Massey & Levy, 1999, p. 150). Even as late as 2003, Pitts found television stations lacking in their use of multimedia—even with the general definition of “audio, video and animated products” (Pitts, 2003, p. 6). Another brief study in 2004 attempted to redefine multimedia in legacy news media through interviews with early practitioners. Zerba (2004) interviewed seven online journalists who produced multimedia presentations for newspaper companies. Her findings generated a definition of a “multimedia package” as “the integration of more than one medium in combination with interactivity that is related to a story, event or information” (Zerba, 2004, p. 14),

Deuze (2004) initially embraces a broad definition and makes the case that multimedia in online journalism is often characterized in two different ways: (1) “As the

presentation of a news story package on a website using two or more media structures, such as (but not limited to) spoken and written word, music, moving and still images, graphic animations, including interactive and hypertextual elements”, and (2) “presentation of a news story package through different media, such as (but not limited to) a website, a Usenet newsgroup, e-mail, SMS, MMS, radio, television, teletext, print newspapers and magazines (a.k.a. horizontal integration of media)” (Deuze, 2004, p. 140). Most research on multimedia within online journalism deals with Deuze’s first understanding. By 2008 Quandt’s (2008) study of 10 online news websites abandoned any attempt to define multimedia by its combination of content modes, but rather examined the presence or absence of specific formats such as audio streams, video streams and slideshows. This seems consistent with Dimitrova’s and Nexanski’s (2006) argument that there is no clear model to distinguish among features of online journalism. Their research aimed to establish a model for tracking historical changes in online journalism, but they label “convergence” what others label multimedia: “a blend of text, audio, and video content used to convey information in the online news environment” (Dimitrova & Neznanski, 2006, p. 253). One early content analysis compared the online content of six newspapers but assessed only the homepages of each publication. The authors singled out specific content modes as variables, but examined them along with forums, email opportunities and basic hypertext. Thus, while the use of video and audio on these websites was measured, it was not *called* multimedia (Dibeau & Garrison, 2001). A pair of researchers looking at legacy media in Great Britain quote the Financial Times’ editor James Montgomery as offering an inclusive but informal definition: “In

multimedia you've got to mix up video, graphics, stills, audio and video" (Thurman & Lupton, 2008, p. 449).

BEYOND THE DEFINITION – MULTIMEDIA RESEARCH TRENDS

Early to Mid-1990s: Labels Still Unclear

Initial research dedicated to the digitization of legacy media makes virtually no mention of multimedia but, rather, attempts to quantify and record news organizations' appearances on the World Wide Web. In this period most computer users and news consumers were still on dial-up connections, so even the size of a photograph made a difference in the online experience. Few gave much thought to producing material with video and audio components (R. Hood, personal communication, September 22, 2010). However, it is important to review some of this early scholarship since it paved the way for later studies.

Having made costly forays into news-by-computer in the late 1970s and early 1980s with the trials of videotext and Qube TV, legacy news organizations were both sheepish and excited about having an online presence even prior to the Web's entry as a feasible platform for delivering news and information (Becker, Dunwoody, & Rafaeli, 1983; Flichy, 1999; Kyriakou, 2001; Negroponte, 1995). Many of the early studies simply tallied the numbers of daily newspapers delving into website publishing. Some outlined the subscription charges (if they had any) and others compared departmental budgets dedicated to bringing operations online (Harper, 1996). Articles in magazines such as the *Columbia Journalism Review* and the *American Journalism Review* cautioned and cajoled newswriters about the perils and promises of the Internet (Auletta, 1998; Pavlik, 1997).

A few predicted the economic changes that might develop as time on the internet pulled consumers away from legacy media (Bromley & Bowles, 1995; Regan, 1995).

Anticipating the changes needed in journalism education, some studies looked at the responses of communication programs to the need to train journalists for new media technologies (Singer & Craig, 1996; Wilkins, 1997). The themes in this period emphasized economic issues faced by those legacy news organizations and journalism programs that acknowledged that they would have to move toward digital distribution and training, but could not abandon their core. Even 20 years later, this continues to be a concern for managers of legacy media organizations as well as educators.

Later 1990s: Legacy Comparisons

By 1996, about a fifth of daily newspapers in the U.S. were online and scholars started conducting studies to reach past the simple questions of whether a media entity supported a presence on the Web or not (Pew, 2009). This led to the first comparisons between the digital and the traditional. One study examined how the content of the print edition was translating in the online edition and found that most newspapers and television stations were still funneling old material onto the Web instead of creating anything new (Martin, 1998). One set of researchers conducted a census of all television websites in existence in October of 1996 and recorded the content of homepages over a five-day period. The primary finding showed a great deal of variation in content on the Web, with some stations using their websites heavily for news and others for promotion (Bates, et al., 1997). Some stations placed only text and still frame-grabs on their websites while others ventured into short video clips from their newscast—repurposing

of material often referred to as “shovelware” (Thalhimer, 1994). All-in-all, many of these studies found legacy news organizations doing very little that was new or innovative.

John Pavlik (1996, 2000b) predicted the coming of the fully digital television newsroom—sometimes called a multimedia newsroom—but gave most attention to the stations’ ability to stream their standard productions into homes, not their ability to create new content for the Web.

After conducting somewhat casual observations of the online versions of several newspapers in the United States, Fredin (1997) observed that most legacy news organizations were continuing to repurpose material from their print product. In a lengthy essay he suggested a prototype called the hypermedia news story—a network of computer files that are interlinked to enable consumers to flow from one story to another. Hyperlinking was certainly in use before Fredin’s writing, but he envisioned a more seamless flow. His examination of past scholarship on how people read newspapers (glancing, scanning) led him to ask how an online news presence could take advantage of “hyperstories.” He encouraged publishers and editors to examine their audiences and to offer something new online. Fredin broke down the new non-linearity offered to readers and pointed out that legacy news organizations could choose to veer off from the main story—to digress—and create a different reading experience from that offered by a typical printed story. Fifteen years later it looks as if some legacy news organizations have moved closer to Fredin’s vision of the hyperstory, but there are many that still lag behind in taking advantage of online tools.

By the end of the ‘90s, the focus of research had broadened to include changes in the day-to-day work of journalists and how journalism itself would change with the use

of online platforms. Rosen (1999) advocated the idea of “public journalism” in his book, *What are Journalists For?* and said access to editors and managers via online interaction would feed this movement. At the same time Deuze (1999) was asking questions about erosion of skills and standards in professional journalism as the world saw the rise of citizen journalism on the Web. While Rosen saw this increased interaction as a benefit, Deuze characterized it as more of a threat. In 1997 a group of editors, publishers, news directors and online managers gathered at the Poynter Institute to discuss values and ethics in “new media.” Over the next two years they developed a list of protocols to help newsrooms deal with everything from plagiarism, to digital manipulation, to accuracy versus immediacy. They contend (and few would disagree) that “journalists will always be journalists, but the medium in which they toil does, indeed, make a difference in how they do their jobs” (Mann, 1998). The changes brought on by this shift to online journalism and the effects on newswriters and their products were finally being noted in research. While not yet specifically aimed at anything called multimedia, Deuze, Rosen and those at Poynter foresaw the shift in *who* was producing news content and *how* it was being produced.

“Interactivity” was another area of research that arose in the late 1990s. On most media websites, editors were giving readers the opportunity to “talk back” to reporters and to talk with one another through email links, forums and chat rooms. The approach to interactivity in these early studies was quite different from interactivity as it came to be defined later, since these researchers first looked at the amount and types of interaction between readers and newswriters on newspaper websites (Schultz, 1999). In other work the researchers were trying to discern the meaning of the interactions in terms of

interpersonal communication rather than the one-to-many model of mass communication (Rafaeli & Sudweeks, 1997). These studies foreshadowed the idea of the news consumer as a more powerful actor in the world of media consumption, an actor freed from the gatekeeping of an editor.

Finally, as more newspapers and stations moved online in the late 1990s, website design and content garnered more attention in research. Most scholars found little in the way of innovation or risk-taking by publishers and station managers. A Web presence was seen not as a way to reach a news audience through the Web, but simply as an extension of practices already in place, such as promotion and classified advertising. Creative directors were still translating newspaper design principles to the Web. In fact, often the only accommodation made for distribution via the Web was to compress the size of a photo so users could download it more quickly (Peng, Tham, & Xiaoming, 1999; Schultz, 1999).

The New Millennium: 2000-2005 – More Complexity

In scholarship on convergence and new media, the first few years of the new millennium saw researchers moving toward organizational case studies, audience studies and additional content analyses.

Tampa studies: In the early 2000s, a cluster of studies centered on the Media General properties in Tampa, Florida, as *The Tampa Tribune*, WFLA and TBO.com were merged into one newsroom in March of 2000. These studies concentrated more heavily on organizational and personnel issues, and use of the term “multimedia” became more common (Garrison & Dupagne, 2003; Huang, Rademakers, Fayemiwo, & Dunlap, 2004; Lawson-Borders, 2006; Singer, 2004).

The studies in Tampa were the first to show the cultural divides between newspaper and television newsrooms as well as those between the word-people and the visual-people. Managers and newswriters were beginning to ask more questions about new roles as everyone tried to figure out how best to tell a story.

Audience study: In another type of study during this period Sundar (2000) ran an experiment of audience perceptions and memories of online stories that included audio and video. News managers might have taken particular note of Sundar's cautionary analysis of his findings:

Given that this study suggests that audio and video downloads are powerful cues, and are likely to be noticed and scrutinized more by users than a few paragraphs of text, extreme care should be taken when considering multimedia enhancement for existing websites. Therefore it is imperative that site designers exercise strict gatekeeping vis-à-vis technical quality in order to assure positive perceptions of the site" (Sundar, 2000, p. 495).

Sundar's work noted the huge popularity of online video and other multimedia, but also pointed to continuing technical limitations that might keep audiences from fully embracing these new ways of storytelling.

Further content analyses: Chan-Olmsed and Park (2000) chose to conduct a content analysis of television station websites. Their primary aim was to document the variety of story themes—local, sports, feature—but they also measured the presence of video and audio streaming, plus interactive features such as polls and surveys. Not surprisingly for a study conducted in 1998 when broadband connections were less common, video and audio streaming were present on fewer than 15% of the websites. The rise of electronic commerce on legacy media websites is evident in the next few studies of this period. In research

on newspaper websites conducted in 1999, Dibeau and Garrison (2001) found that interactive features were most commonly used in what they termed “consumer services”—opportunities for the news consumer to enter a search term or express interest in a product. Most newspapers were trying to find any way possible to monetize their online product, so this uptick in consumer-oriented interactivity is not surprising. The researchers found little use of what they termed “plug-in technology”—features using Flash™, Shockwave™ and similar software to create and view multimedia. They did find some use of audio and video, but again, it was rare. Massey and Levy (1999) also examined the interactivity in a study of online English-language newspapers in Asia. Multimedia was found on only two of the 44 websites analyzed, but the researchers were working with a broad conceptual definition of interactivity: “Complexity of choice available.” Working with this framework they looked for the users’ ability to choose content on websites—news, entertainment or commercial—and users’ ability to customize the website to their needs.

Cross-media studies: The next stage in multimedia research included the appearance of a few studies of content on the Web that compared newspapers, radio and television websites. Lin and Jeffres (2001) conducted one of the first studies to look across all legacy media. They still do not refer to audio and video as multimedia; these occurrences were analyzed as “technical elements” (Lin & Jeffres, 2001, p. 560). Their research looked at the websites of radio stations, television stations and newspapers in 25 metropolitan areas in the United States and took on the broad topics of news content, commercial content, promotional

content and technical content. They found that radio stations in the late 1990s used their websites primarily for self-promotion, while television stations were attempting to involve their viewers through email and other audience feedback channels. Newspaper websites were more likely to emphasize their news presence, particularly in one-newspaper towns where they lacked any perceived competition. In addition they tested market size to see if it influenced the type or quantity of multimedia. Although their findings were inconclusive, it was one of the first studies in multimedia to consider this variable. In their conclusion Lin and Jeffres speak of the opportunity for all of these media organizations to “break off their conventional ‘shell’ by presenting their content elements in the most technically sophisticated manner, using an entire range of digital (interactive) text, graphic, audio, and audio-visual techniques” (Lin & Jeffres, 2001, p. 569). Even in 2001 when their article went to press, the websites of legacy media had not yet made many changes beyond their conventional practices. For instance, newspapers on the Web were still laid out much like the print editions and television websites were concentrating on headlines.

2006 and Beyond: Video Makes an Entrance

In the fall of 2006, newspaper publishers had an epiphany about video on their websites (Halstead, 2007). They put video cameras in the hands of most of their still photojournalists and asked that they produce multimedia presentations. Within another year National Public Radio hired videographers (Merithew, 2007). Not surprisingly, scholarship concerning multimedia and online journalism was also increasing and specifically taking into account the expansion of moving images, recorded sound and

interactivity on legacy news media websites. The literature of multimedia in this period falls into two categories. First, the content analyses become somewhat more specialized in that they looked at a single publication or a single media type. Second, online and trade publications articles gave even more attention to the use of multimedia presentations on legacy media websites.

The content analyses of this period became more explicit about the specific elements of multimedia presentations. Most operational definitions in these studies required the presence of moving images, recorded sound or interactive elements like polls and games. One study that compared online award winners in the United States and Europe attempted to determine if homepages lived up to their potential in providing a variety of multimedia and interactive options. The study found that all of the award winners carried an increasing number of these types of presentations. However, it also confirmed that the organizations' highest priority was immediacy—the need to constantly update their websites—rather than to produce multimedia (Beyers, 2006). Other content analyses continued to simply capture the state of online content. Robinson (2007) studied the specific use of interactivity in multimedia for a single story series and not only quantified its use but also found audience engagement to be much greater than that found in print alone.

Journalism and production textbooks also began to emphasize multimedia production skills around this time. They provided instructions about creating Flash presentations for news websites producing for news websites, writing for news websites and even broadcasting for news websites (Allan, 2006; Foust, 2005; Kolodzy, 2006; M. McAdams, 2005; Quinn, 2006; Wenger & Potter, 2008b). Their emphasis was on

preparation, but often course texts can be an indicator of perceived industry need. One paper published during this period examined the curriculum of an online journalism program in Rio de Janeiro. It critiqued not only the curriculum itself, but also the fact that the course was delivered online (Brasil, 2006). Websites and books aimed at coaching veteran journalists going through the multimedia transition also begin to appear (Briggs, 2007; Fadley, 2007; Hernandez, 2006; Mulvany, 2006).

In a logical extension of changes in journalism curriculum, some scholarship asked journalism industry leaders about their hiring practices in relationship to multimedia skills. John Russial (2008) surveyed newspaper managers and found little need for cross-training journalism students to be multimedia-fluent since the companies employed dedicated online staffs. Russial limited his study to newspapers. Despite Russial's findings, industry magazines and websites encouraged journalism schools to emphasize multimedia cross training and many have (Fadley & Owens, 2008; Gillmor, 2008; Wenger & Potter, 2008a, 2008b).

Scholarly research in the late 2000s continued the trend toward studies of specific media organizations such as *The New York Times*. This time period also saw more exacting studies of multimedia using large samples of all newspapers for instance. Most continued to use some form of content analysis or survey in order to assess the state of multimedia at the time, but the research questions sought more detail. In one study the first research question simply asked, "What categories of interactive features exist on online newspapers" (Chung, 2008, p. 661). She came up with 15 types of interactivity, two of which are considered multimedia (audio files and video files). While Chung's methodology relied primarily on survey information, her findings acknowledged the

growing use of multimedia presentations on newspaper websites. Jacobson (2008) conducted a very specific content analysis of *The New York Times* multimedia, looking for types of stories, narrative qualities and hypertextuality. She found that multimedia presentations were frequently more personal and more subjective than the traditional print story. In a study that sampled all U.S. newspapers, Robert Bergland (2008) discovered that by 2007, 65% of newspapers used self-produced video on their websites, about half (52%) had some form of recorded sound, but only 7% used any sort of interactive graphics.

Two other pieces of research in this time period begin to branch out again and compare multimedia use among media types. Huang (2007) examined the websites of the top 100 newspapers in the U.S. and compared them with television station websites in the top 25 markets. He sought to quantify the use of “rich media”—interactive digital media such as audio, video and animation. He found the rich media adoption rate to be quite high within the largest newspaper and television companies, but noted that they enjoyed a greater concentration of capital and technological resources than legacy news organizations in smaller markets. However, when Huang compared newspaper to television news organizations, the newspapers were generally lagging behind broadcasters in the use of rich media. Seelig (2008a) also carried out a content analysis of multimedia and expanded her study beyond newspapers to include other legacy media types. Her unit of analysis was the organization’s homepage. While her sample considered newspapers, television and radio, the examination of multimedia was limited to its news subject content and general design.

Recent writing on multimedia appears not only in scholarly studies, but also in trade publications and in online venues. The conversation is moving from the practicalities of *how* multimedia is done to an examination of *why* legacy news organizations should spend the time and staff resources on lengthy Flash™ projects and audio slideshows. In many of these recent articles, viewers, readers and listeners are perceived as having somewhat schizophrenic online habits that involve a great deal of multi-tasking and, therefore, short attention spans for multimedia presentations (Gahran, 2010). However, there is also evidence that when consumers *know* they are visiting a website where longer material is the norm, they will invest the time to view high-quality multimedia presentations and also be likely to share it through social networking websites and via email (Brown-Smith, 2009). Several authors of these more recent articles take up the issue of production priorities in news organizations. In talking with managers they hear the same issue—that resources are taxed. With so many new distribution options and limited staff, managers must try to choose not only the best value for their business but also for their audiences. Whether it is the production of multimedia, data visualization or social media participation, many legacy media newsrooms struggle to do these new things *at all*, let alone do them *well* (Connolly, 2007; Smith, Tanner, & Duhe, 2007; Stray, 2010). Judging from the responses in these articles, legacy media managers are juggling the maintenance of their traditional production methods with the need to fully embrace digital production and distribution.

CONCEPTUAL DEFINITIONS AND HYPOTHESES

Over two decades of research on convergence and new media scholars have come to some agreement on a definition of multimedia (Boczkowski, 2004; Burnett & Marshall, 2003; Jenkins, 2006; Manovich, 2002; Pavlik, 2001). Drawing from those definitions, a useful way to define multimedia in this study is *a combination of content modes, including text, still images, recorded sound, moving images, and graphics, produced in such a way that the information can be accessed interactively and/or digitally.*

For purposes of this research, a multimedia presentation is a combination of three or more *content modes*: text, still images, recorded sound, moving images, or graphics. Content modes are most often combined into the following multimedia *formats* on legacy media websites: video, audio+adjacent images, audio slideshows and interactives.⁵ The multimedia presentations in this study were always identified as one of these formats, but each format contains specific *characteristics*, which are variables such as the amount of textual information included, the number of still images used and the origin of those images. Other characteristics variables appearing in these formats are: Narration tracks, natural sound, special video effects, music, call-ins, the presence of a reporter and/or anchor, and the use of studios. These are measured in two ways, either presence/absence or frequency. A few require discussion prior to presentation of the hypotheses.

- The length of textual information on websites is split into short-form and long-form in order to differentiate between brief paragraphs and captions

⁵ The term “interactives” is used here in the plural form to identify a specific type of multimedia presentation. The term is commonly used in research on museums (Bearman & Trant, 1999) and in education scholarship (Cowie, Jones, & Harlow, 2005).

versus more lengthy multi-paragraph stories that can be part of multimedia presentations.

- Still images originating from “outside sources” include those from Associated Press, Getty, Reuters and other foreign press services. The distinction is made to differentiate between images created by an employee of the legacy news organization and those made by others.

Further explanations of conceptual and operational definitions are detailed in the methodology chapter.

Framework for Hypotheses

Boczkowski’s (2004) theory suggests that a news organization’s past practices heavily influence its current path in online journalism. He proposes that acceptance of technologies and workflows little known in the legacy news world is heavily dependent on institutional history and organizational practices. Dahlgren (1996) also suggests that even in cyberspace, media have a set of “institutionally structured features” (p.63) and that these “forms and processes organize the work done within a particular medium” (p.63). In other words, legacy news media will likely bring these forms and processes to their online production of information, such as multimedia presentations. There are several case studies of organizational change during the transition to online journalism, but they are primarily broad attempts to identify the meaning of convergence and its impact on newswriters (Johnsen, 2004; Lawson-Borders, 2006; Robinson, 2007; Singer, 2004, 2008). Boczkowski (2005), Dahlgren (1996), and Deuze (2004) draw the clearest lines connecting organizational structures and their effect on multimedia. Through primarily qualitative methods, all have found that most legacy news organizations tend to

reproduce their existing journalistic practices. While some studies have compared newspaper, television and radio websites, most have limited themselves to the study of homepages and have not delved into the structure of multimedia presentations (Beyers, 2006; Erdal, 2009; Lin & Jeffres, 2001; Seelig, 2008a, 2008b). Most of these studies merely noted the presence or absence of user forums, surveys and games, and gave little attention to the multimedia presentations as objects of study. For the most part these studies used content analysis and surveys of news managers, therefore failing to examine the production process for multimedia presentations.

Legacy media's transition to distribution on the Web brought many hopes for new and different ways of producing a story. However, most studies of this transition looked at a single media type and suggest that the old ways of doing things still appear to have the upper hand in the movement toward convergence. From the earliest content analyses of newspaper and television homepages to more detailed ethnographies in these organizations, researchers are studying convergence, but still finding old news production practices in place. This study seeks to find evidence of this apparent adherence to old formats specifically in the multimedia presentations of legacy news organizations. These presentations hold the most promise for experimentation, but the question remains as to whether newspapers will favor print practices, radio stations will rely on sound, and television stations will repurpose video. This study also tests whether factors such as organization size and newsworker training have any effect on multimedia presentations. Even as technology advanced, with Flash™ video players and ever-cheaper cameras increasing the use of multimedia presentations on legacy media websites, researchers

have not responded to them new methodological tools to analyze this quickly changing landscape. Based on the research outlined above, the following hypotheses are presented.

Hypotheses Group 1:

Legacy media make use of certain modes, formats and characteristics in their traditional methods of information production and distribution. Newspapers rely on text and still images, television is reliant on video and radio is reliant on audio. These first 13 hypotheses relate to the general proposition that legacy media websites will maintain similar formats and characteristics to those in the originating medium.

- A. Newspaper, television and radio websites will differ in their use of multimedia presentation formats: specifically, television will use a higher percentage of the video format than the other legacy media types, radio will use a higher percentage of audio formats than the other legacy media types and newspapers will use a higher percentage of formats that rely on still images and text than the other legacy media types.*

In a broad sense Hypothesis 1-A outlines what I will call the “legacy effect” on multimedia presentations—a legacy media organization’s reliance on its long-established information production practices.

- B. Multimedia presentation formats on newspaper websites will have a higher percentage of long-form textual use than multimedia presentation formats on radio and television websites.*

In examining the use of text within multimedia presentation formats, I expect to see a legacy effect with newspapers favoring a traditional use of the written word as opposed to the more visual and aural traditions of radio and television stations.

- C. The average number of still images used in the video format of multimedia presentations on newspaper websites will be higher than the average number of still images used in the video format of multimedia presentations on radio or on television websites.*
- D. The average number of still images used in the interactive format on newspaper websites will be higher than the average number of still images used in the interactive format on radio or on television websites.*

As with the tradition of the written word, newspapers use still images in print. The legacy effect is at work here in that the video and interactive formats of newspapers' multimedia presentations also make use of still images even though a news organization is able to provide more moving images in the video and interactive formats.

- E. The multimedia presentation formats on radio websites will use a higher percentage of outside sources for still images than those of multimedia presentation formats on newspaper websites.⁶*

While the use of still images from Associated Press and other wire services have been examined in research of major news events, there is little to indicate how these services are used in the multimedia presentation formats on the websites of legacy news media organizations. Here the legacy effect surfaces in the question of where a radio news organization obtains the still images used in its multimedia presentations. A newspaper employs photojournalists to capture the still images that appear in print and now appear in its multimedia formats, but radio stations must rely on outside sources such wire services or must enlist their audio-oriented reporters to take the still images used in

⁶ The sources of still images were not measured for television in this case since television news organizations do not generally use the audio+adjacent or audio slideshow formats.

multimedia presentation formats. Therefore my expectation is that radio news organizations will show a high percentage of still images from outside sources.

F. Multimedia presentation formats of radio websites will contain a higher percentage of natural sound than the multimedia presentation formats of newspaper or television websites.

Radio news organizations generally pride themselves on orienting the listener to the scene through the use of natural sound since traditionally they have not had access to textual or visual elements for presenting stories. In considering the legacy effect, I expect that natural sound still will be used heavily even in multimedia presentation formats that add still images and video.

G. Multimedia presentation formats of radio websites will contain a higher percentage of music (both part of the scene and imported) than the multimedia presentation formats of newspaper or television websites.

Radio news organizations also come from a legacy tradition that often adds music to audio stories either from the story scene or as a prerecorded element. This legacy effect leads to the expectation that use of music would carry into multimedia presentation formats.

H. Multimedia presentation formats of radio websites will contain a higher percentage of call-ins than the multimedia presentation formats of newspaper or television websites.

While television news organizations sometimes use audience call-ins during news broadcasts, this is a more common practice on traditional radio stations. It is expected

that it is a regular practice for radio stations to repurpose their broadcast shows onto a website in the form of a multimedia presentation format that adds a still image or two.

- I. The video formats of multimedia presentations on television websites will contain a higher percentage of studio settings than the video formats of multimedia presentations on newspaper or radio websites.*
- J. Reporters will appear in greater percentage in the video formats of multimedia presentations on television websites than in the video formats of multimedia presentations on newspaper or radio websites.*
- K. Anchors will appear in greater percentage in the video formats of multimedia presentations on television websites than in the video formats of multimedia presentations on newspaper or radio websites.*

The use of studio settings with guests being interviewed or giving commentary is one of the legacy traditions of television news organizations. Other legacy traditions include the use of an anchor lead-in and a reporter in the field. Because the video from broadcasts is often repurposed in multimedia presentations on these news organizations' websites, I expect to see these studio settings, anchors, and reporters present in the video format multimedia presentations on television websites.

- L. The video formats of multimedia presentations on television websites will contain a higher percentage of dissolves than the video formats of multimedia presentations on newspaper or radio websites.*
- M. The video formats of multimedia presentations on television websites will contain a higher percentage of special effects than the video formats of multimedia presentations on newspaper or radio websites.*

Television stations have had the luxury of using dissolves between shots and special effects between stories since the invention of the video switcher more than 50 years ago. Again, because of the repurposing of video from news broadcasts, I expect to see these practices in the video format of the multimedia presentations these websites.

Hypothesis Group 2:

Previous research suggests that the size of a legacy news organization traditionally is associated with the volume and breadth of coverage provided to its audience (Carroll, 1989; Davie & Lee, 1993). For example, a newspaper with greater circulation might have a greater number of reporters to do investigative reporting or have more space for still images. In digital information production and distribution, the size of a legacy news organization may be related to the availability of resources to create multimedia presentations. The following two hypotheses propose that as the size of the legacy news organization increases, the number and variety of multimedia presentations will increase, specifically:

- A. *As the size of the news organization increases, the use of resource-intensive multimedia presentation formats (video, interactives, multimedia packages) used on the news organization's website will increase.*
- B. *As the size of the news organization increases, the number of interactive multimedia presentations used on the news organization's website will increase.*

CHAPTER THREE

METHODS FOR CONTENT ANALYSIS

The content analysis portion of this study was divided into three phases. I offer a brief overview of each phase and then describe them all in more detail in the rest of the chapter.

PHASE I - Website observations and establishment of operational definitions.

This phase of the project consisted of:

1. Informally observing a variety of newspaper, television and radio websites to develop a sense of the multimedia presentations most common to these legacy media types.
2. Investigating professional journalism organizations' websites for common multimedia labels.
3. Establishing lists of common multimedia content modes, formats and characteristics.
4. Formalizing definitions and variables for the pilot study.
5. Setting up a coding scheme for the pilot study.

PHASE II - Pilot study.

This phase of the project consisted of:

1. Testing sampling methods for suitability.
2. Establishing a collection process for capturing multimedia on the proposed pilot websites.
3. Training two research assistants on collection and capture process for assistance with this step.
4. Collecting and examining multimedia presentations on the websites of *The New York Times*, CNN, NPR and Slate.com using the trial variables and sampling methods.

5. Coding all multimedia presentations found on these websites for a two-week time period.
6. Analyzing data collected in pilot.
7. Training one of the research assistants to code multimedia presentations.

PHASE III – Formal content analysis.

This phase of the project consisted of:

1. Adjusting collection methods and variables to be coded.
2. Selecting the sample of news organizations for study.
3. Adjusting the capture procedure to accommodate each organization's website.
4. Selecting a three-month time period for capturing multimedia presentations from these news organizations' websites.
5. Using a systematic probability sample with a randomly chosen start to capture multimedia presentations from websites producing more than 50 multimedia presentations during the three-month time period.
6. Testing intercoder reliability on 20% of multimedia presentations.
7. Coding sampled multimedia presentations.

PHASE I: WEBSITE OBSERVATIONS AND ESTABLISHMENT OF OPERATIONAL DEFINITIONS

Over approximately three months I observed the websites of several dozen legacy news organizations. The websites were chosen based on recommendations of photojournalists, newspaper editors, television producers, and multimedia experts along with personal choices of websites I thought would be useful to monitor.⁷ These informal

⁷ *The Las Vegas Sun, The Washington Post, The New York Times, The San Jose Mercury News, The Roanoke Times, The Miami Herald, The Seattle Times, The Seattle Post Intelligencer (now online only), The Boston Globe, The Milwaukee Journal Sentinel, The*

observations helped me identify differences and similarities among the websites produced by different types of media organizations. These observations, along with the definitions drawn from the literature discussed earlier, helped me define the *multimedia presentation* as the recording unit for the study. As mentioned in Chapter 2, the definition of multimedia is a combination of content modes, including text, still images, recorded sound, moving images, and graphics, produced in such a way that the information can be accessed interactively and/or digitally. In this study a multimedia presentation must combine at least three of these content modes.

During this phase of the project, I discovered that news organizations label multimedia presentations using a variety of headings—multimedia, media, video, video picks, watch+listen, picture stories, galleries, audio, audio slideshows, interactive feature, interactive graphic, interactive map, infographics, innovations. I followed all links with labels like these and recorded information about the content found at the “end” of the links. This process helped identify the various ways multimedia appeared on legacy media websites. I also searched through professional journalism organizations’ websites for common multimedia labels, since these groups often take cues from the journalists they represent. At the end of this investigative phase I had identified four multimedia presentation formats (as defined in Chapter 2, p. 30): video, audio accompanied by static still images on a single page (referred to in this study as audio+adjacent image), audio slideshows, and interactives (timelines, polls, games, maps, calculators, panoramas,

Spokesman Review, The Minneapolis Star Tribune, The Chicago Tribune, The Detroit Free Press, The Los Angeles Times, MSNBC, CNN, ABC, CBS, WFAA, WFLA, KGW, KHQ, KING-TV, KOMO-TV, KIRO-TV, KUSA, KTUU, NPR, WBUR, KUOW Radio, KIRO Radio, KOMO Radio

graphics). I also further identified common characteristics in presentations in all of these formats.

Conceptual and Operational Definitions

Using information gained from the website observations and previous research, I identified 46 variables that could be used to study multimedia presentations. The following is a brief chronology of their development.

1. I identified the content modes as the individual types of information combined in multimedia presentations to convey a message. They are:
 - a. **Text**
Any non-photographic alphanumeric symbol contained within the multimedia presentation.⁸
 - b. **Still Images**
Any photograph that does not contain motion caused by movement of a camera or movement within the frame. Still images can occur in an audio-slideshow or a video.⁹
 - c. **Recorded Sound**
Any sound—narration, sound bites, natural sound and music—contained within the multimedia presentation.
 - d. **Moving Images**
A sequential set of moving images captured through the use of camera, colloquially called video.
 - e. **Graphics**
Computer-generated non-textual information such as a map or timeline.¹⁰

⁸ In coding photographer/editor credits were not included.

⁹ In coding the use of the “Ken Burns Effect” — movement to zoom in or out on a static image—is considered a still image.

¹⁰ In coding this included animation and other moving graphics used to illustrate a portion of the message or the whole message

2. I identified four formats that reflect typical *combinations* of the multimedia content modes. These format variables are:

- a. *Video*

A multimedia presentation format made up of moving images displayed in a serial fashion that serve to illustrate reality.¹¹ These multimedia presentation formats most resemble what appears in traditional television news.

Figure 3.a



CNN

¹¹ At least 5 seconds of motion during the multimedia presentation was required for coding as video.

b. Audio+Adjacent Image

A multimedia presentation format made up of sound recorded and edited in a serial fashion that accompanies a related image (or occasionally two or three images) present on a single page. Typically a play button must be clicked on the presentation to activate the sound. At least one still image and minimal text are also displayed with the story. The sound portions of these multimedia presentation formats most resemble what appears in traditional radio.

Figure 3.b

The screenshot displays an NPR audio player interface. On the left, there is a section titled "Listen to the Story" with a play button icon, the text "Morning Edition", and a duration of "(7 min 20 sec)". Below this is a still image of Ben Stiller and Jennifer Jason Leigh sitting on a couch. To the right of the image is a text block: "High Hopes: In *The House of Blue Leaves*, zoo-keeper Artie Shaughnessy (Ben Stiller) dreams of becoming a Hollywood songwriter and his mistress, Bunny Flingus (Jennifer Jason Leigh), will do anything to help him get there. Forty years ago, Stiller's mother played Bunny in the original off-Broadway production. And in 1986, Stiller played the role of Artie's son." Below the text is a date "April 25, 2011" and a "text size" control. At the bottom left of this section is a link: "Watch Scenes From 'The House Of Blue Leaves'".

On the right side of the screenshot is the main NPR player window. The address bar shows "www.npr.org/player/v2/mediaPlayer.html?action=1&t=1&...". The NPR logo is at the top. The main content area features the heading "THEATER" followed by the title "For Ben Stiller, 'House Of Blue Leaves' Is Home". Below the title is the text "Morning Edition Apr 25, 2011 | [See Full Story](#)". A short paragraph follows: "Stiller stars with Edie Falco and Jennifer Jason Leigh in a dark comedy about the quest for fame." At the bottom of the player window is a control bar with a play/pause button, a progress slider showing "00:37 / 07:19", and buttons for "Email" and "Get link".

NPR

c. *Audio Slideshow*

A multimedia presentation format made up of sound recorded and edited to accompany a large set of still images arranged in a specific order to play in a serial fashion. Typically a play button must be clicked on the multimedia presentation format to activate the sound and images.

Figure 3.c



The New York Times

d. Interactives

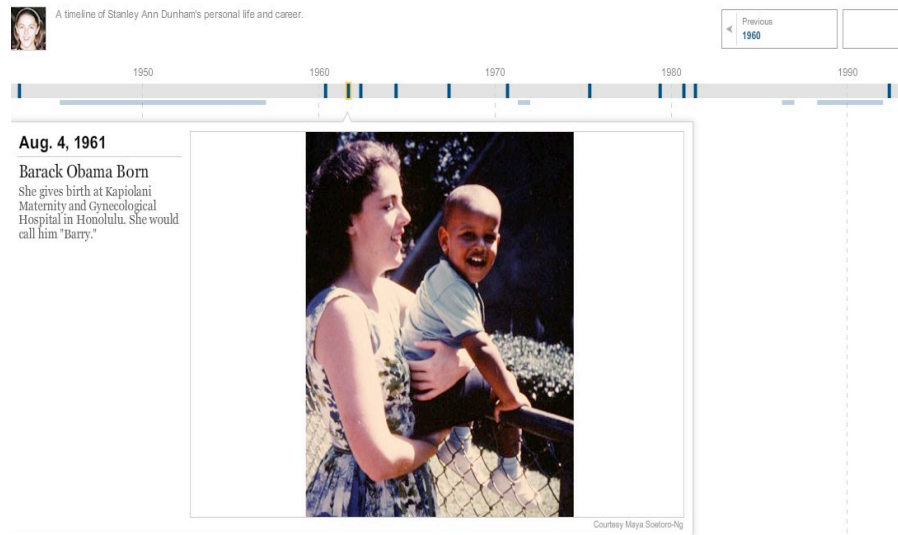
Multimedia presentation formats in which users are able to see additional content revealed via mouse click.¹² Types of interactive multimedia formats include:

- **Timeline:** Type of interactive format in which the user is able to scroll a mouse along the points on the timeline to reveal text, video, audio or photos. The example below is a lifeline of President Obama's mother.

Figure 3.d

Milestones: The Life of Obama's Mother

[Related Article »](#)

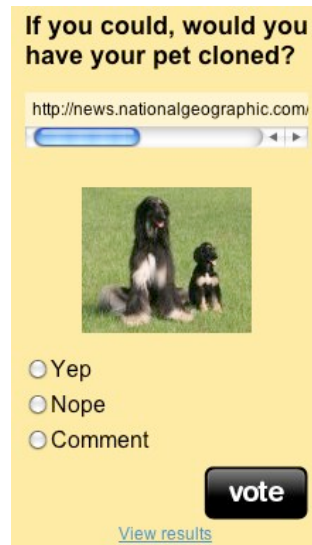


The New York Times

¹² In coding this did not include simple use of hypertext clicks, since it is now ubiquitous on news sites.

- **Poll:** Type of interactive format in which the user gives an opinion via a poll related to a story. The example below is giving an opinion on whether dogs should be cloned.

Figure 3.e



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- **Game or Quiz:** Type of interactive format in which the user is able to participate in a game or quiz related to a story. The example below is a Super Bowl trivia quiz.

Figure 3.f



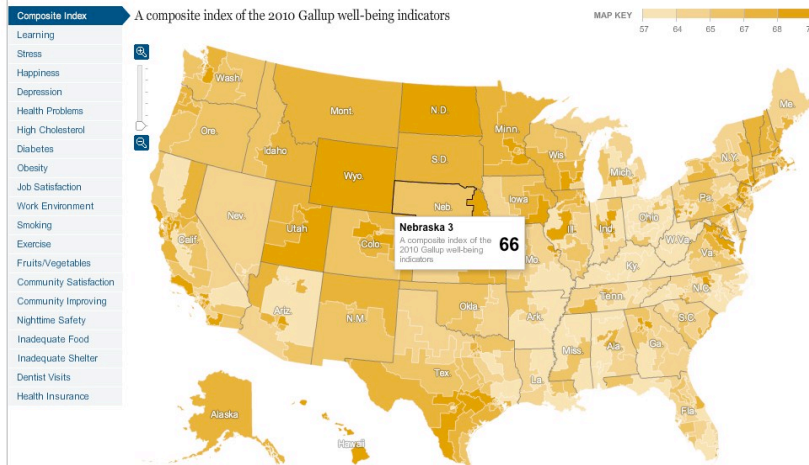
KGW

- **Map:** Type of interactive format in which the user is able to scroll a mouse along the map to reveal text, video, audio or photos. The example below is a map showing citizens' feelings of well-being by state.

Figure 3.g

Mapping the Nation's Well-Being

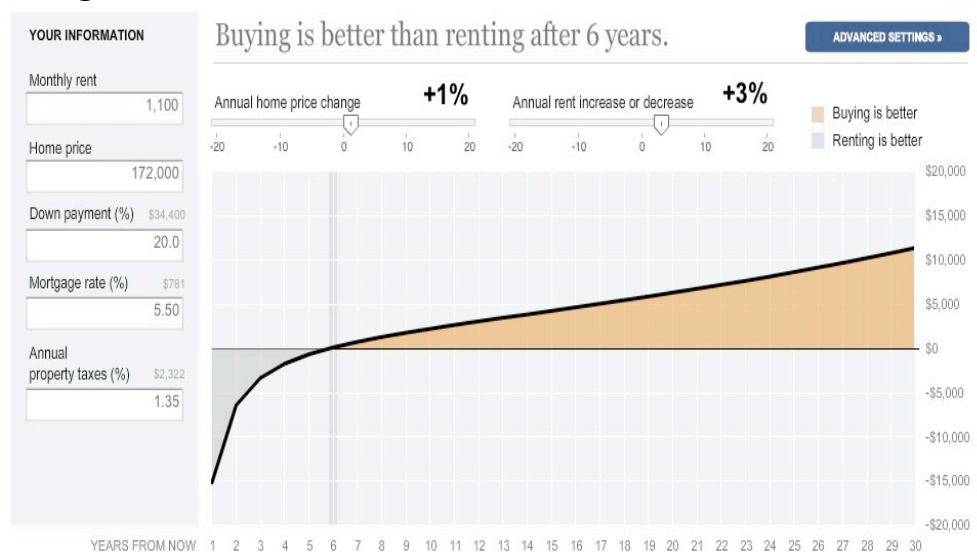
For the last three years, Gallup has called 1,000 randomly selected American adults each day and asked them about indicators of their quality of life. Responses are converted to the Gallup-Healthways Well-Being Index. Here are the 2010 results, sorted by Congressional districts. [Related Article »](#)



The New York Times

- **Calculator:** Type of interactive format in which the user is able to insert data for a calculation related to the story. The example below shows the user statistics on renting or owning a home.

Figure 3.h



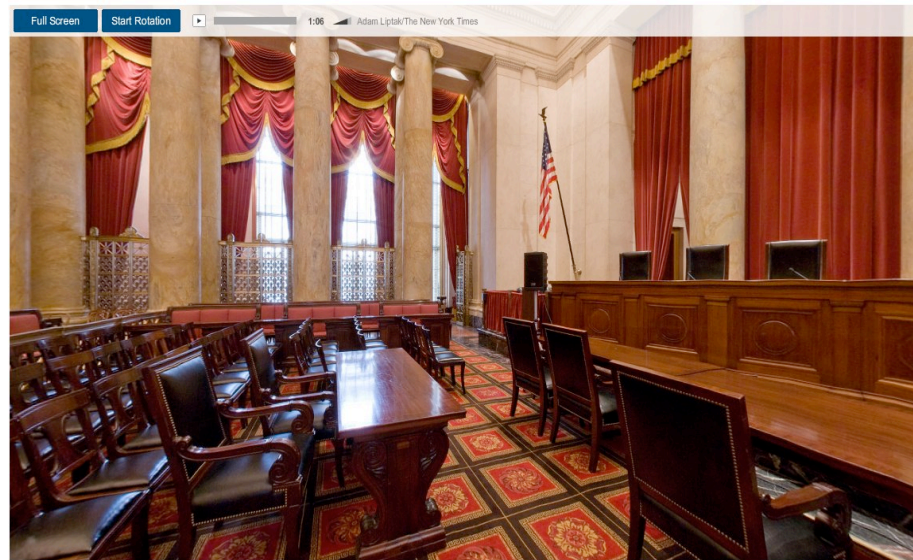
The New York Times

- **Panorama:** Type of interactive format in which the user is able to guide the photograph to look around in 360°. The example below is a full view of the U.S. Supreme Court Chamber.

Figure 3.i

Panorama: Inside the Supreme Court

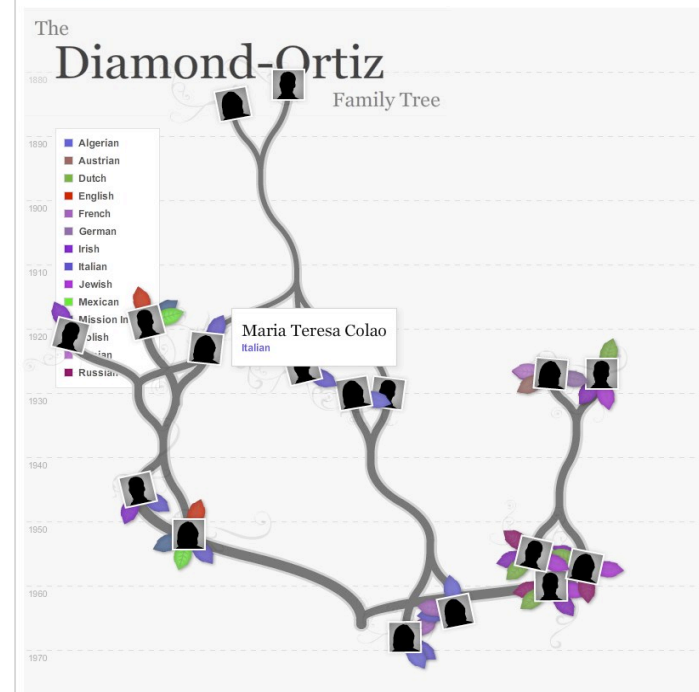
While sound bites and 24-hour news may set the agenda for much of Washington, the Supreme Court still forbids television coverage of its arguments. The only way to see the nation's highest court in action is to visit. For those who can't make the trip, here is a rare look at the empty courtroom.



The New York Times

- **Graphic:** Type of interactive format in which the user is able to interact with something other than a timeline, poll, game/quiz, map, calculator or panorama. The example below is a family tree.

Figure 3.j



The New York Times

e. **Package**

A multimedia presentation format that constitutes a special report set off from the rest of the news website and containing at least three of the other multimedia formats outlined above. This format allows users to watch a video, interact with a map, listen to audio and look through slideshows—all engaging a single topic. Usually these are large projects planned weeks and months in advance by multiple contributors (this format was added to the content analysis following the pilot study, bringing the multimedia presentation format types to five for the formal content analysis).

Figure 3.k

The screenshot shows a multimedia news package titled "UNDER 21" with the subtitle "DRINKING ON VIRGINIA COLLEGE CAMPUSES". The package features a video player showing a scene of young people at a social gathering. To the right of the video are three interactive elements: "watch videos", "read stories", and "explore data". Below the video is a text summary: "Under 21" chronicles the drinking culture on college campuses in Virginia and takes an in-depth look at the Amethyst Initiative, a national movement encouraging discussion about lowering the drinking age. Check out our stories and videos to learn more about the drinking-age debate and explore data on drinking at Virginia schools collected in an original Roanoke Times survey.

Navigation links: MAIN | STORIES | VIDEO | DATA | COMMENT

Word cloud content: adult age allowed around bad, binge blacksburg, clamp college, dollar drinking, gets going, graduating highschool kids, live to drinking age, discuss the, parents policies.

The Roanoke Times

3. After identifying the initial types of multimedia presentation formats, I identified a set of variables called characteristics. These describe the qualities or aspects of any multimedia presentation format. Some characteristics appear in all multimedia presentations and some are specific to particular formats. Below is a list of characteristics analyzed in this study. All characteristics that were coded in the pilot study appear in Appendix I. The final study code sheet appears in Appendix II.

a. Text included within multimedia presentation formats. This characteristic was measured for all formats.

i. Explanatory or Caption Text - External

This characteristic variable categorizes the text accompanying the multimedia presentation format in one of three ways: 1) longer story: a multi-paragraph story (Figure 3.l). 2) shorter paragraph: a few sentences that make up a somewhat extended caption (Figure 3.m). 3) both longer and shorter: a multi-paragraph story on the same page with a shorter paragraph or caption (Figure 3.n). These are *outside* the portion of the multimedia presentation format where motion or sound is activated by a play button or a mouse click.

Figure 3.1

**Longer Story
accompanied by video
- no shorter caption**

Saved by many hands

When Cunningham arrived at the fire scene, it was obvious to him that the flames blazing from the roof would be impossible to extinguish. They would later learn that the fire probably began when a work crew heated wooden beams to strip off some old paint.

Cunningham approached restaurant owner Harry Leist (rhymes with diced).

"You are going to stand here and watch the roof burn off of your restaurant. There's nothing I can do," the deputy chief said he told Leist. "But if you get enough of your employees to work with our firefighters, we will go in there and carry out anything that is not bolted to the floor."

From that point forward, about half of the 77 firefighters who eventually showed up on the scene worked salvage and overhaul while the rest tried to tame the fire.

They grabbed framed photos of past Norfolk and Western Railroad presidents, paintings, antique furniture and other railroad memorabilia, then ran out and passed it off to employees in the parking lot. The entire time, the roof threatened to collapse and the crowd of onlookers -- who came to snap pictures and share a piece of the sorrow with the Leist family -- steadily grew.

In the end, firefighters and employees saved just about every antique in the building, including a gorgeous oak buffet that had to be carried out by nine men. They were unable to save a 1913 Nickelodeon piano, which Cunningham said "was just too damn heavy" and too close to the origin of the fire.

Structurally, all that was left of the main dining room and lounge were stone walls and a concrete slab floor. But the Leist family was determined to bring back the Bedford landmark.

"There never was a question in our minds that we would rebuild," said Marty Leist, Harry's wife. "This is what we do."

Video: Liberty Station gets a new look



Video by Jeanna Duerschert | The Roanoke Times

On Feb. 8, less than five months after the devastating fire, Liberty Station restaurant reopened with a new name and much of the "olde" feel.

Rebuilding with help

Harry Leist said he was lucky to have a general contractor for the rebuilding process who had worked on the restaurant before. They stayed as

loyal to the old, historic look as possible. For example, destroyed windows were remade using wood salvaged from the building.

When I went in for lunch last week, it was clear that customers still were absorbing the changes.

The Roanoke Times

Figure 3.m

THE SPOKESMAN-REVIEW

73°

Topics

Times

Places

Media

5-day forecast

Quick links: [Prep sports](#) • [State employee salaries](#) • [WA Primary Election 2011](#) • [News quiz](#) • [Slice blog](#)

February 12, 2010 in City

00:33 01:09

Globe of Thunder

Brothers Cody and Kyle Ives travel the world performing a motorbike stunt known alternately as the Globe of Steel, Globe of Thunder and Globe of Death. They performed in Spokane at the Inland Northwest Motorcycle Show and Sale on Friday, Feb. 12, 2010.

Shorter text accompanying video

The Spokesman Review


Figure 3.n

China Rejects U.S. Complaints on Its Currency

By EDWARD WONG and MARK LANDLER
Published: February 4, 2010

BELJING — A senior Chinese official said on Thursday that [China](#) would not bow to pressure from the United States to revalue its currency, which [President Obama](#) says is kept at an artificially low level to give China an unfair advantage in selling its exports.

[Enlarge This Image](#)



Adrian Bradshaw/European Pressphoto Agency
The People's Bank of China in Beijing. Washington wants China to stop depressing its currency.

Related
Times Topics: [China](#)

The official, Ma Zhaoxu, a Foreign Ministry spokesman, said at a regular news conference here that “wrongful accusations and pressure will not help solve this issue.”


Mr. Ma was reacting to remarks on trade that Mr. Obama made on Wednesday when he met with Democratic senators in Washington. Mr. Obama stopped short of saying China manipulates its currency, but his words on China’s economic policies were harsh — the United States, he said, had “to make sure our goods are not artificially inflated in price and their goods are not artificially deflated in price to create a competitive disadvantage.”

Economic assessments of the yuan’s value range from a 25 to 40 percent undervaluation compared to the dollar and other currencies. The gap is wider than at any time since July 2005, when the Chinese government, under pressure from the Bush administration, decided to do away with the renminbi’s peg to the dollar and allow the currency to float in a narrow band against the dollar and other currencies.

The renminbi appreciated 21 percent, but since July 2008 it has remained at the same value — today, one dollar equals about 6.83 renminbi, also called the yuan.

Both Longer and Shorter text accompanying video

VIDEO » [More Video | Multimedia »](#)



00:30 01:44
PAUSE

WORLD
China Hits Back in U.S. Yuan Row
Dismisses Washington’s Threat Over its Currency

SHARE

TWITTER
E-MAIL
PRINT
REPRINTS
SHARE

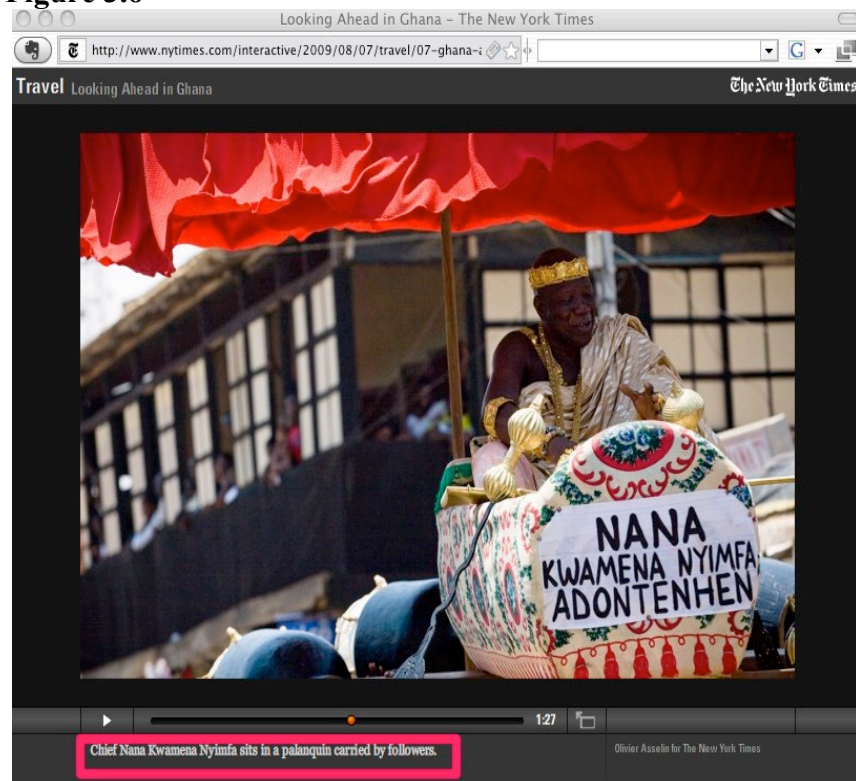
WATCH TRAILER

The New York Times

ii. **Explanatory or Caption Text – Internal.** This characteristic was measured for all formats.

This characteristic variable categorizes the text accompanying the multimedia presentation format in one of three ways: 1) a longer story—a multi-paragraph story, 2) a shorter paragraph—a few sentences that make up a somewhat extended caption, or 3) a multi-paragraph story on the same page with a shorter paragraph or caption. These are *inside* the portion of the multimedia presentation format where motion or sound is activated by a play button or a mouse click. In *The New York Times* slideshow below the short text changes as the audio slideshow plays (Figure 3.o).

Figure 3.o



The New York Times

b. **Length of multimedia presentation format.**

This characteristic variable measures the running time of the video format, the audio+adjacent images format (specifically the audio portion of the story), and audio slideshow format.

- c. **Use of narration track in the video format, audio+adjacent images format (specifically the audio portion of the story), and audio slideshow format.**¹³

This characteristic variable assesses the presence or absence of a reporter or anchor voice telling part of the story in the multimedia presentation.

- d. **Use of on-camera reporter in the video format.**

This characteristic variable assesses the presence or absence of a reporter's image in the multimedia presentation. In television this is often called a "stand-up" and the reporter is talking and often holding a microphone. In multimedia presentations on newspaper websites the reporter might lead into a video story (Figure 3.p).

Figure 3.p



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¹³ Use of narration track, number of people interviewed, number of sound bites, use of natural sound, and use of music were variables measured in all of these formats and recorded as separate variables. They are combined here for ease of explanation.

e. **Use of on-camera anchor in the video format.**

This characteristic variable assesses the presence or absence of an anchor's image in the multimedia presentation. These are most commonly shown as a lead-in to a story that takes place away from the anchor's location (Figure 3.q).

Figure 3.q



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f. Use of studio settings in the video format.¹⁴

This characteristic variable assesses the presence or absence of a studio setting involving a newscast-like look in the multimedia presentation. For example a show like Meet the Press or a daily news roundup (Figure 3.r).

Figure 3.r



CNN

g. Number of people interviewed in the video format, audio+adjacent images format (specifically the audio portion of the story), and audio slideshow format (see footnote 8).

This characteristic variable accounts for the number of people interviewed in the video format, audio+adjacent images format (specifically the audio portion of the story), or audio slideshow format.

¹⁴ Variable titled “talk back interview” in pilot study codebook.

h. Number of sound bites¹⁵ in the video format, audio+adjacent images (specifically the audio portion of the story) format, and audio slideshow format (see footnote 8).

This characteristic variable accounts for the number of individual utterances for the story – the same person speaking in two different parts of the story is counted twice.

i. Use of natural sound in the video format, audio+adjacent images format (specifically the audio portion of the story), and audio slideshow format (see footnote 8).

This characteristic variable assesses the presence or absence of natural sound in the video format, audio+adjacent images format (specifically the audio portion of the story), and audio slideshow format. Natural sound is considered anything that gives the user or viewer the sense of “being there.” For instance, if soldiers are fighting and the volume of the shooting is up for a second or two in the multimedia presentation, that is a natural sound moment. This does not include music, which is assessed in the next variable.

j. Use of music in the video format, audio+adjacent images format (specifically the audio portion of the story), and audio slideshow format (see footnote 8).

This characteristic variable categorizes any music in the multimedia presentation in one of two ways: 1) if the music is part of the presentation, a radio blaring in a car or a person playing an instrument, then it is “part of.” 2) If it is a theme song for the piece or a music bed for the presentation then it is “imported.”

¹⁵ A section of spoken sound edited from a longer interview in order to illustrate the story. The video version of a quote (Zettl, 2005).

k. Use of special effects in the video format (e.g. dissolves, wipes, picture-in-picture).

This characteristic variable assesses the presence or absence of special effects in video presentations. These are special editing techniques and can convey the passage of time or a change of place. A *dissolve* has been added when you can momentarily see both pictures on either side of a cut in the video. A *wipe* has been added when the transition has a shape (heart, circle, star, oval, blinds) or appears to push one picture off the screen for another. This category includes picture-in-picture, pixilation of a part of the picture (covering a face or a gesture for instance), highlight of a part of the picture (brighter oval on a football player of note or someone in a photograph of note), any non-word graphic added to the piece (excluding station identifiers), any picture or piece of information that spins or tumbles into the frame (Figure 3.s).

Figure 3.s



KGW

l. Number of still images within the video format.

This characteristic variable accounts for the number of still images that appear during a multimedia presentation of the video format. This is a typical use of a still image on a television website (Figure 3.t).

Figure 3.t



Jeff Thompson, KGW.com Staff

 Recommend

KGW

m. Use of text on the screen in the video format.

This characteristic variable categorizes the type of text on the screen in video presentations. Any text overlain on a still photo or moving image (often called “Chyron” in television), and used to identify speaker or location (see Figure 3p). It categorizes any text on the screen in a video presentation in one of two ways:

- i. If it was apparent that the text was added during the live broadcast—usually using the station logo and colors—then it is “television Chyron.”
- ii. If the text was put on during editing—usually added as a full-page—then it is “software generated.”

n. Nature of text on screen in the video format.

This characteristic variable categorizes the text on screen into the following types (see Figure 3p):

- i. Lower-third¹⁶ location indicator.
- ii. ID (name).
- iii. Translation.
- iv. Locator and ID.
- v. Locator and translation.
- vi. General information.
- vii. Program logo.
- viii. All forms.

¹⁶ Graphics placed near the bottom of the screen to identify location and speaker. In television these are generated from a broadcast switcher live during the broadcast – not produced by the editor (citation – Herbert Zettl).

o. Source of still images in the audio+adjacent images format and audio slideshow format.

This characteristic variable assesses the source of still images (origin of photo). The arrow on example below (Figure 3.u) is pointing to the photo cut line. In this case the photo was not taken by an NPR employee, but by an Associated Press photographer.

Figure 3.u

The screenshot shows an NPR article titled "Folsom Embodies California's Prison Blues" by Laura Sullivan, dated August 13, 2009. The article features a photo of Johnny Cash performing in a prison cafeteria. A red box highlights the photo, and a blue arrow points to the cut line between the photo and the text. Below the photo, there is a caption: "Johnny Cash performs for inmates at Folsom State Prison in January 1968." The article text begins with "January 1968, Johnny Cash set up his band on makeshift stage in the cafeteria at Folsom State Prison in California." and continues with "Hello, I'm Johnny Cash," he said in his deep baritone to thunderous applause. Song after song, the inmates thrusted their fists and cheered from the same metal benches now bolted to the floor. It's coming that Cash played may have been the high-water mark for Folsom — and for the California Department of Corrections and Rehabilitation.

The men in the cafeteria lived alone in their own prison cells. Almost every one of them was in school or

Where a photographer stood 40 years ago and captured Cash's famous concert, an officer now stands in a metal cage. He's armed with three guns and pepper spray.

There are now 15 to 20 assaults a week here at Folsom. And while inmates used to mix with one another, Folsom today is entirely segregated by race — in the cafeteria, on the yard and in the cell blocks.

“
When they're confined in this environment, the

The screenshot also shows the NPR Media Player interface, the NPR logo, and a "donate" button. The browser address bar shows "http://www.npr.org/...".

NPR

PHASE II: PILOT CONTENT ANALYSIS

In this phase, I conducted the pilot content analysis of multimedia presentations of four legacy news media websites, coding the 46 variables described previously.

Website Selection Process

I purposely selected the websites of *The New York Times*, CNN, NPR and Slate.com¹⁷ for the pilot study because these organizations regularly use multimedia presentations. They also are different legacy media—print, television, radio, online-only—and are among the most popular websites with the general population.¹⁸ After selecting the websites, I determined that a sample collected over two weeks would provide a sufficient number of multimedia presentations from these four websites.

The next step in the pilot study was to determine an efficient and adequate data collection method. Unlike newspaper stories, television or radio scripts, the content of a website is not published on a regular schedule. Therefore, in this pilot study the content on the websites was captured five times per day for two weeks (August 10-22, 2009: at approximately 5am, 9am, 1pm, 5pm, and 9pm). These weeks were chosen in part because no extraordinary news events, elections or special sporting events were scheduled for these weeks, and therefore they might be seen as more typical.

¹⁷ Slate.com is called a “net-born” site: one that has no roots in legacy media, but began on the Web.

¹⁸ CNN, NYTimes consistently in top 5 according to Cyberjournalist <http://www.cyberjournalist.net/top-news-sites-for-june-2008/> and PEW http://www.stateofthemediamedia.org/2010/online_nielsen.php. NPR rates very high in listenership <http://www.npr.org/about/press/2009/032409.AudienceRecord.html> and is one of the few national radio networks with significant online presence. Slate has been online for 15+ years and is a long-time award winner <http://www.slate.com/id/2147070/>.

I captured the content of these news organizations' websites using Iterasi, a website archive service that allowed me to schedule and annotate full-website captures. A full-website capture maintains all links to material rather than just taking a screen-shot of a page. In some cases capturing the news organization's homepage was adequate to locate the multimedia presentations, but on others (*The New York Times* and Slate) it was necessary to capture a page labeled "video" or "multimedia" in addition to the homepages. In the end three different types of pages were collected if present—the homepage, video page, and multimedia page. I followed all links on these pages that might contain multimedia presentations. For instance, if the word *video* or a camera icon appeared next to a story headline, I followed that link. If the word *audio* or a speaker icon appeared near a story headline, it too was followed. In some cases the website simply linked the word *interactive* to indicate some sort of multimedia.













Multimedia Presentation Collection Process

Once a website was archived, the steps to preserve the multimedia presentations required the use of Jing as a screen capture device to record these presentations in .mp4 video file format. The steps needed for capture on each website are summarized below and fully outlined with screen shots in Appendix III.

1. The news organization's website captures for each day and time were pulled from the Iterasi capture log according to date. The websites were inspected specifically for multimedia presentations that met the criteria of using three or more content modes. As mentioned in Chapter 2 (p. 30), at least three of the content modes—text, still images, recorded sound, moving images, or graphics—must be present to qualify as a multimedia presentation.

2. In order to collect these on the websites chosen for study, it was necessary to identify each organization's titles and symbols for multimedia. Most websites use hyperlinked words or icons to point users to video, audio+adjacent images, audio slideshows, and interactives. The following table (3.1) indicates the various hyperlinks that most often led to multimedia presentations and the common formats on the news organizations' websites. All of these links were followed, although not all led to presentations that met the three-mode criteria for multimedia presentations.

Table 3.1
Common links/icons for multimedia presentations.

	Video	Audio+Adjacent Image	Slideshows	Interactive
New York Times	 Video:		 AUDIO SLIDE SHOW:	 Interactive
CNN	 VIDEO			
NPR	Watch The Video			
Slate.com	SLATE V		-----	-----

3. Any multimedia presentations found through clicking on these icons and hyperlinks were captured in a way that preserved all cursor movement, motion and sound on the screen. The capture software provided a way to see traditional linear videos as well as any interactive material on the website. In each case, the

video capture software was started before the researcher clicked the hyperlink.

The following procedures were used for each of these multimedia formats:

- a. **Video:** Hyperlink to the video clicked, video allowed to load, clicked a play button if the video did not auto-play. Video stopped at end.
 - b. **Audio+adjacent image:** Hyperlink to audio clicked. If separate window opened, this window was moved to make sure photograph was visible. If multiple photographs were included, the researchers clicked through the photos as the audio played in order to see all available photos connected to the story.
 - c. **Audio slideshows:** Hyperlink to the audio slideshow clicked and if play was automatic, the audio-slide show was recorded in the same manner as video. If not an auto-play, the researchers started the slideshow manually.
 - d. **Interactives:** Hyperlink to the interactive format presentation clicked and every available hyperlink and mouse-roll-over element used. If there was video within the interactive feature, this video was played; if there was a slideshow, the slideshow was played; if there was audio, the audio was played.
4. Each file was listed on a spreadsheet containing a content identification number, permalink URL, story headline (text that was originally hyperlinked), multimedia format, and date-to-website (Appendix IV).
 5. All recorded files (.mov and .mp4 file formats) were then stored for later analysis.

Pilot Coding Process

The two-week collection period produced archives of more than 400 web pages from which 91 multimedia presentations were eventually drawn. Two research assistants participated in two hours of training for capturing multimedia from the websites, but the researcher conducted the final coding on the pilot websites' multimedia presentations. A sample of the raw data spreadsheet appears in Appendix V, and partial findings from the pilot appear in Appendix VI. Each multimedia presentation was coded as video, audio+adjacent image, audio slideshow, or interactive. The four formats seldom appear together on most news organizations' websites, so once a multimedia presentation was coded for a particular format, then a specific set of characteristics, such as use of narrator, reporter presence, number of still images was coded for that multimedia presentation.

The pilot results were tabulated on a spreadsheet in order to produce a basic set of descriptive statistics for this small data set. They showed the multimedia presentations of CNN and Slate were dominated by video, and NPR's multimedia presentations were dominated by audio. *The New York Times* used more video than any other format, but overall showed some variety throughout its multimedia presentations. These results were presented at a 2009 conference where I also solicited feedback on the methodology (Achterman, 2009).

PHASE III: THREE-MONTH CONTENT ANALYSIS

Adjustments to Procedure and Variables

On the basis of what I learned in the pilot study, some adjustments were necessary to proceed with a larger study.

1. The two-week sample was dominated by those news organizations that use multimedia presentations every day. This led to a front-heavy sample for CNN (nearly half of the video presentations), while other websites produced fewer multimedia presentations of any kind in the allotted time frame. In order to avoid this skew in data, the larger content analysis was spread over three months and employed systematic sampling to gather and analyze content throughout the entire 3-month period, thus achieving a more balanced number of presentations from each news organization. These procedures are described in detail below.
2. The larger study did not include the fourth category of websites—the so-called net-born sites. These presumably would *not* exhibit a legacy effect, but the preliminary analyses suggested that the most admired net-born sites often had strong links to traditional legacy media.
3. Seeing some issues with the ability to assess some variables accurately, I decided to test all of the variables by training one additional coder to analyze the multimedia content collected in the pilot study. This led to dropping four variables because they did not perform reliably and it was clear that data from other variables would yield the answers. The variables that were eliminated were:
 - a. Number of people interviewed.
 - b. Number of sound bites.
 - c. Use of on-screen text.
 - d. Nature of on-screen text.
4. One variable was clarified by changing the name from “talk-back interview” to “studio setting” to indicate that the video was recorded in a studio. This captured whether television websites in particular were repurposing studio-produced

- programming for the Web and whether newspaper and radio websites tend to mimic this practice.
5. The variable “call-in” was added since there were a few occasions when the radio program on the website was a host-guest-caller type of multimedia presentation. This assessed the presence or absence of a call-in from an audience member during a multimedia presentation.
 6. The variable “raw” was added to the variables tested in the video format to accommodate the occasions when unedited material appeared in a multimedia presentation.
 7. A fifth format category was added to accommodate a presentation type that was rare, but went beyond video, audio+adjacent image, audio slideshow, and interactive multimedia presentations. As noted on page 50, the “package” format was added to describe a specialized multimedia presentation page offering the user access to video, still images, audio and interactive presentations on a single subject. Some examples seen in the pilot were election coverage, disaster coverage, and special sports coverage.
 8. Other variables from the pilot study were clarified on the code sheet in order to collect more concrete data. Three variables (Story Category, Ad Presence and Related Links) do not contribute to this research but were left in the coding scheme for use in a future study.

These adjustments brought the total number of variables to 48 for the final content analysis. Three of these variables were measures of length of story, so they were not included in the tests for intercoder reliability.

Another outcome of the pilot study was the beginning of a list of potential subjects to be contacted for interviews in the last phase of the study. The names of producers, photographers and reporters involved in the production of the various news organizations' multimedia presentations were noted as websites were captured. These eventually led to interviews with those directly connected to multimedia, as well as with their supervisors and others influential in online media.

Selecting News Organizations for Study

I purposely chose to analyze legacy news websites based on the multimedia awards given by national journalism organizations. Not all legacy news organizations are producing multimedia regularly, and thus focusing on award-winners was a logical choice for collecting sufficient material for analysis. This technique of examining award winners has been used in recent research (Chung, 2007; Greenwood & Smith, 2007). In the case of my research on multimedia presentations, charting the news organizations most frequently named as finalists by independent journalism associations provided a consistent stream of presentations for study. It also pointed to those organizations whose work was recognized as being on the leading edge of this new form of news production. Given that there are few, if any, studies examining multimedia, focusing on the strongest examples of this genre seemed appropriate.

The first step in this process was determining which journalism organizations' awards to consider. Three criteria were used to choose these organizations:

1. Journalists, Web designers and/or other design-oriented members conducted the judging.

2. The organization has a strong visual tradition shown by commitments to awards including photojournalism, and graphic design/layout.
3. There is evidence the organization was expanding its competition to include more multimedia categories by having added new categories in the last five years.

Using these criteria, the list of journalism awarding organizations was narrowed to the following because they tended to provide the most specific definitions of multimedia. These organizations are also recognized for leadership in journalism and Web design (Table 3.2).

Table 3.2
Journalism organizations and legacy media roots.

Original Medium	Journalism Organization
Print	Society for Newspaper Design (SND), Associated Press Managing Editors (APME), Pulitzers, Society of Professional Journalists (SPJ), Editor & Publisher (EPpy), National Press Photographers' Association (NPPA), White House News Photographers' Association (WHNPA)
TV	National Academy of Television Arts & Sciences (NATAS – Emmy), Radio & Television News Directors Association (RTNDA), DuPont, Peabody
Radio	Radio & Television News Directors Association (RTNDA), DuPont, Peabody
Web ¹⁹	Online News Association (ONA), Webbys, OpenWeb, WebAwards, Crunchies

Ultimately the Pulitzer, DuPont, OpenWeb and Crunchies awards were not used in the scoring, primarily due to a comparative lack of clarity in defining multimedia in entry requirements. It was also clear that including these organizations would not have

¹⁹ Awarded based on website only, but legacy media sites have always been included.

significantly altered my selection of websites for analysis since some of the same news organizations won awards across all of these journalism organizations.

The next step was to examine the remaining twelve competitions in order to choose news organizations for this study.

1. I collected the names of all news organizations placing first in any multimedia category in any of the 12 competitions between 2004 and 2009.²⁰ This produced a list of 190 legacy news organization websites that met that criterion over the five-year period.
2. Because larger news organizations often have more resources to devote to multimedia production I decided to stratify the organizations by size. In the online world the equivalent to audience size is unique visitors per month. Therefore the 190 legacy news organizations were sorted by size using the Online News Association's criteria:
 - a. Micro: 1-99,999 monthly unique visitors.
 - b. Small: 100,000-499,999 monthly unique visitors.
 - c. Medium: 500,000-4,000,000 monthly unique visitors.
 - d. Large: More than 4,000,000 monthly unique visitors.

The Web Analytics Association defines a unique visitor as *the number of inferred individual people within a designated reporting timeframe, with activity consisting of one or more visits to a website. Each individual is counted only once in the unique visitor measure for the reporting period* (WAA, 2006).²¹ The

²⁰ If the journalism organization did not include online categories since 2004, the oldest possible award date was used.

²¹ Online Journalism Awards Entry Requirements: All entrants will be required to enter the number of unique visitors to the parent Web site where the entry appeared for the most recent month available.

- Online News Association is the leading professional journalism organization focused on content of the Web (ONA, 1999).
3. Each news organization's URL was checked for unique visitors per month at TrafficEstimate.com (<http://tools.trafficestimate.com/>), then the list was sorted from highest number of unique visitors per month to lowest.
 4. Once size was established, the list was sorted by legacy media type (newspaper, radio, television).
 5. A point system was applied in calculating the number of awards given by various journalism organizations. The system accounts for variance in the number of awards given per year in several categories (Table 3.3). For example, the National Press Photographers Association gives monthly awards in various categories, and RTDNA presents awards annually. Therefore, if a news organization received an annual award, it was given 12 points, whereas a monthly award was given 1 point.

Table 3.3
Point totals for journalism organization awards.

Awarding Organization	Awards/Yr	Points for each award
Society for Newspaper Design (SND)	1/yr, 4 categories for web	3
Associated Press Managing Editors (APME)	1/yr. 1 category for web	12
Society of Professional Journalists (SPJ)	1/yr 1 category for web	12
Editor & Publisher (EPpy)	1/yr, 2 categories multimedia	6
National Press Photographers' Association (NPPA)	12/yr, 5 categories for multimedia	.20
White House News Photographers' Association (WHNPA)	1/yr 1 category for web	12
National Academy of Television Arts & Sciences (NATAS-Emmy)	1/yr 1 category for web	12
Radio & Television News Directors Association (RTNDA)	1/yr 1 category for web	12
Peabody	1/yr 1 category for web	12
Online News Association (ONA)	1/yr, 7 categories for multimedia	1.7
Webby	1/yr 1 category for web	12
WebAward	1/yr 1 category for web	12

6. This formula was used to total the award points for each news organization.
7. With award points now attached, the list of 190 was again sorted by legacy media type (newspaper, radio, television) and by size according to unique visitors per month (micro, small, medium, large), creating 12 categories.
8. The news organization with the greatest number of points in each group was included in the study; in case of a tie in award points, the news organization with the higher number of unique visitors per month was chosen. No radio news organization qualified in the large category, so the final study was conducted with three news organizations in the micro category, three in the small, three in the medium and two in the large (n=11).

The selected legacy news organizations are outlined here (Table 3.4):

Table 3.4
Selected legacy news organizations.

SIZE	Newspapers	Radio	Television
Micro	<i>The Spokesman Review</i> ; Spokane, WA ²² http://www.spokesman.com	NHPR – New Hampshire Public Radio; Concord, NH http://www.nhpr.org	News 10 – Time Warner; Syracuse, NY http://centralny.ynn.com
Small	<i>The Roanoke Times</i> ; Roanoke, VA http://www.roanoke.com	KCBS Radio – San Francisco, CA http://kcbs.cbslocal.com	KGW – News Channel 8; Portland, OR http://www.kgw.com
Medium	<i>The Detroit Free Press</i> ; Detroit, MI http://www.freep.com	NPR – National Public Radio; Washington, DC http://www.npr.org	MSNBC – New York, NY/Redmond, WA http://www.msnbc.msn.com
Large	<i>The New York Times</i> ; New York, NY http://www.nytimes.com	<i>No radio news organization qualified as large in number of unique visits.</i>	CNN – Cable New Network; Atlanta, GA http://www.cnn.com

Capturing Multimedia

The news organizations' website content was collected from January through March 2010 using the Firefox Web Browser extension tool Iterasi. The following procedure mimics the pilot, but the collection times changed slightly make the hours more flexible for capture. This flexibility made it easier for me to be consistent in collection, particularly with those websites that required manual recording of presentations (detailed in the endnote on limitations).

²² *The Spokesman Review* ranked #2 by a small margin, but was chosen as a convenience due to its proximity to the researcher and the anticipation of on-site interviews with the staff.

1. The home news pages of the 11 websites were archived three times per day (between 6am and 8am; between 2 and 4pm; and between 10pm and 12am). It is critical to preserve these news websites multiple times per day, since changes are sometimes made to content hundreds of times a day.
2. The collection boundary dates were set to take in a quarter of the calendar year during a period in which the only known special event was coverage of the 2010 Winter Olympic Games.²³ The times were chosen to best cover the U.S. news day in three time zones with a fairly even spread over 24 hours. The three-month period provided a variety of weekly news cycles for recording a series of “snapshots” of the state of multimedia presentations on the websites.

The remainder of the capture and recording procedures were essentially the same as those outlined for the pilot on pages 65-67 in this chapter (see note* for limitations). A table of multimedia icons for all 11 websites is detailed in Appendix VII.

Sample

The collection process yielded 3,211 website archives (as noted by the Iterasi log) captured over the three-month period. Using the criteria above, a total of 4,367 multimedia presentations were recorded from the 11 news organizations. Many archived

²³ The Haiti earthquake on Jan. 12, 2010, dominated news for approximately two weeks, but there was little change in the amount of multimedia produced in that time period.

**** Limitations***

In the case of MSNBC.com, video elements were not consistently retained by Iterasi, due to the variety of file types appearing on the site. To partially address this problem, I conducted a site search of the MSNBC.com domain using the headline and topic of the story. Google allows a specific site search using the protocol @<site>.com:<headline>, and using this protocol I was able to obtain a link to the multimedia Iterasi had been unable to capture. The multimedia story was then captured using the same method outlined above. In the cases of CNN.com and Freep.com (*The Detroit Free Press*), it was clear from the first day of collection that these sites’ multimedia presentations had to be captured “live” at the time they appeared due to the software (again, primarily Flash™, but also a CNN CoreVideoPlayer) used in multimedia production.

websites contained more than one multimedia link on the homepage. All archived websites remain on the Iterasi servers, and all multimedia content was saved in separate locations. The goal was to obtain 50 unique multimedia presentations from each legacy news organization (n=550). When the collection process was complete, nine of the 11 websites contained significantly more than 50 multimedia presentations. For each of these nine websites, I drew a systematic probability sample with a randomly chosen starting point in order to select 50 multimedia presentations to analyze. *The Roanoke Times* produced only 34 multimedia presentations and *The Spokesman Review* only 43 over the initial three months of collection. I collected multimedia presentations for one additional month (through April) to determine whether the pattern of multimedia production remained the same. In other words, did *The Roanoke Times* and *The Spokesman Review* produce approximately the same number of multimedia presentations in the video format, audio+adjacent format, audio-slideshow format, interactive format and multimedia package format, as they had in an average month between January and March? The news websites of *The Roanoke Times* and *The Spokesman Review* were recorded in the same manner as outlined above. A simple count of video formats, audio+adjacent formats, audio-slideshow formats, interactive formats, and multimedia package formats appearing during April determined that the production was, indeed, consistent with the prior months. The few additional multimedia presentations were recorded, but the original multimedia presentations collected between January and March were the only ones used for analysis (n=34 for *The Roanoke Times*; n=43 for *The Spokesman Review*). In total, that produced 527 multimedia presentations for analysis –

50 each from nine websites, plus 77 from *The Roanoke Times* and *The Spokesman Review*.

Reliability Assessment

As noted earlier, following the pilot study I trained a coder using multimedia content collected in August of 2009. This research assistant and I coded 20 presentations representing each of the multimedia formats. We applied the code guide independently in order to assess initial intercoder reliability. Following this practice session, misunderstandings or disagreements were discussed in order to clarify instructions and improve reliability and the coding formal protocol was reassessed. This process of practice with pilot study files was repeated until acceptable reliability levels (generally 100 % agreements or a Scott's Pi of at least .70 or above) were reached on all key variables. I then coded all 527 multimedia files using the Firefox browser to give a consistent appearance to the websites being analyzed. All multimedia material was saved in .mp4 and .mov video file formats and was viewed using Quicktime Player.

Following data collection and coding, 106 multimedia presentations (slightly over 20 percent) were chosen using a systematic probability sample with a randomly chosen starting point. Both researchers coded all of these presentations. These results were entered into ReCalc (Freelon, 2010) to assess overall intercoder reliability on each variable using Scott's Pi or agreement levels of 100%. Inter-coder reliability was calculated in two ways. Simple observed agreement records the percentage of presentations in which both coders observed either the presence or absence of a variable. There were a total of 45 variables tested for reliability (of the total 48 variables, three were measurements of length). Intercoder reliability above 80% agreement, with Scott's

Pi of greater than .65, is viewed as acceptable in most content analysis (Neuendorf, 2002). In this instance 72% of the variables had a percent agreement of above 80%, with Scott's Pi of greater than .65. The ten variables that fall under .65 using Scott's Pi are still above 70% percentage agreement (Table 3.5). Two of these variables were not analyzed for this study; three others were skewed by a low number of occurrences, but were still useful in seeing trends. Three more were ordinal variables and therefore I determined that the percentage agreement above 70% was adequate for analysis. The remaining variables under .65 were also important in identifying trends and were kept for analysis.

Table 3.5
Reliability percentages.

Percentage Agreement	Scott's Pi	Number of Variables
100%	1.0	13
Greater than 90%	.8 - .99	10
Greater than 80%	.65 - .79	12
Greater than 70%	.5 - .64	3
Greater than 60%	.3 - .49	7
Less than 60%	Less than .3	0

See Appendix VIII for reliability tests on all variables.

The principal researcher coded the remainder of the multimedia files (421) over a six-week period. This was done prior to the start of interviews with multimedia producers in order to share some of the findings during those interviews. Variable frequencies were initially calculated on an Excel spreadsheet and each variable was inspected for erroneous

data such as missing observations or coding inconsistency. Once cleaned, the data was transferred to SPSS for analysis.

CHAPTER FOUR

RESULTS OF CONTENT ANALYSIS

The content analysis of multimedia presentations compared the formats and characteristics of multimedia presentations on newspaper, radio and television websites. In reporting these comparisons and relationships between variables I have chosen to avoid using inferential statistical tests. I arrived at this decision for two reasons. First, the chosen sampling strategy was purposive. Second, in some cases the number of news organizations involved in production of particular multimedia formats were very small. The inquiry is, however, framed in terms of hypotheses because the literature suggested that I would find what I have termed a “legacy effect”—a legacy media organization’s reliance on its long-established information production practices. I have taken care to be conservative in the interpretation of my results, looking for consistencies or inconsistencies with the hypotheses and suggestion of general trends. The interpretation of this content analysis simply attempts to see legacy media’s predisposition to certain formats and characteristics in the multimedia presentations. It is impossible to generalize these findings to the larger legacy media population, but the description of these findings will provide some groundwork for subsequent studies that may draw more specific conclusions.

The first group of hypotheses proposes that the multimedia presentations on legacy news media websites will contain similar formats and characteristics to those in the originating medium. The second group of hypotheses proposes that the larger the legacy news organization, the more likely it is to have a higher volume of and a greater variety of multimedia presentations. The final sample included 200 multimedia

presentations from television websites, 150 from radio websites (as noted in Chapter 3, no radio news organization qualified as “large”), and 177 from newspaper websites (also noted in Chapter 3, *The Spokesman Review* and *The Roanoke Times* produced only 43 and 34 multimedia presentations respectively during the time period). Of the 527 multimedia presentations coded from the 11 legacy news organizations’ websites, the formats were distributed as 60% video, 30% audio+adjacent image, 2% audio slideshows, 5% interactives, and 2% packages (Table 4.1).

Table 4.1
Distribution of formats combining all legacy news media types, in percent.

Multimedia Presentation Format	(%) n=527
Video	60.3
Audio+adjacent image	30.4
Audio slideshow	1.9
Interactives	5.1
Package	2.3
Total	100.0

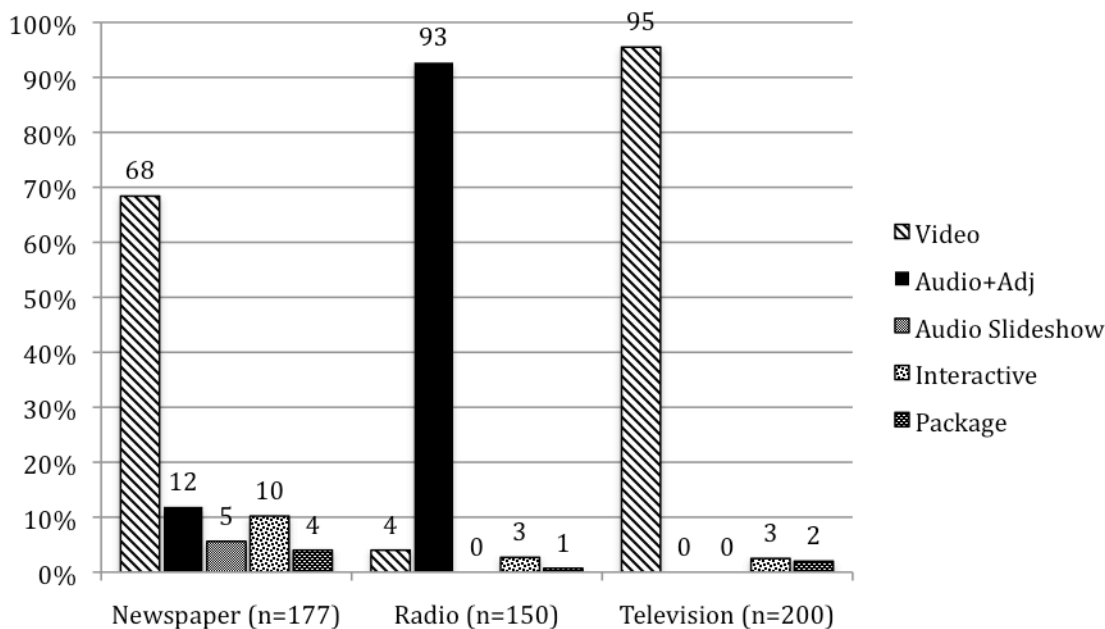
Hypothesis 1-A

Newspaper, television and radio websites will differ in the use of multimedia presentation formats: specifically, television will use a higher percentage of the video format than the other legacy media types, radio will use a higher percentage of audio formats than the other legacy media types and newspapers will use a higher percentage of formats that rely on still images and text than the other legacy media types.

The distribution of formats was close to what had been predicted for radio and television websites but not for newspapers. On radio websites 93% of the multimedia presentations were dependent on audio (audio+adjacent image), and 95% of the multimedia presentations on television websites used the video format. Newspapers, however, tended toward more variety in multimedia presentations with 68% video, 12% audio+adjacent image, 6% audio slideshows, 10% interactives, and 4% packages (Figure

4.1). The presence of audio slideshows is roughly consistent with the expectation proposed in Hypothesis 1-A, but this multimedia presentation format appeared in much smaller numbers than I had anticipated. It seemed that newspapers would be more likely to use the still-image-dominant audio slideshow format since it mimics a newspaper's traditional printed photo essay. According to the definition used in this study, what is in essence an online photo essay becomes a multimedia presentation with the addition of audio. Newspapers were, in fact, the only legacy news media type to make use of the audio slideshow, but the data show it is relatively rare, making up only 6% of the multimedia presentations produced by all newspapers in the study. The more interesting trend is newspapers' inclination to jump into video production.

Figure 4.a



Distribution of multimedia presentation formats across legacy news media types, in percent.

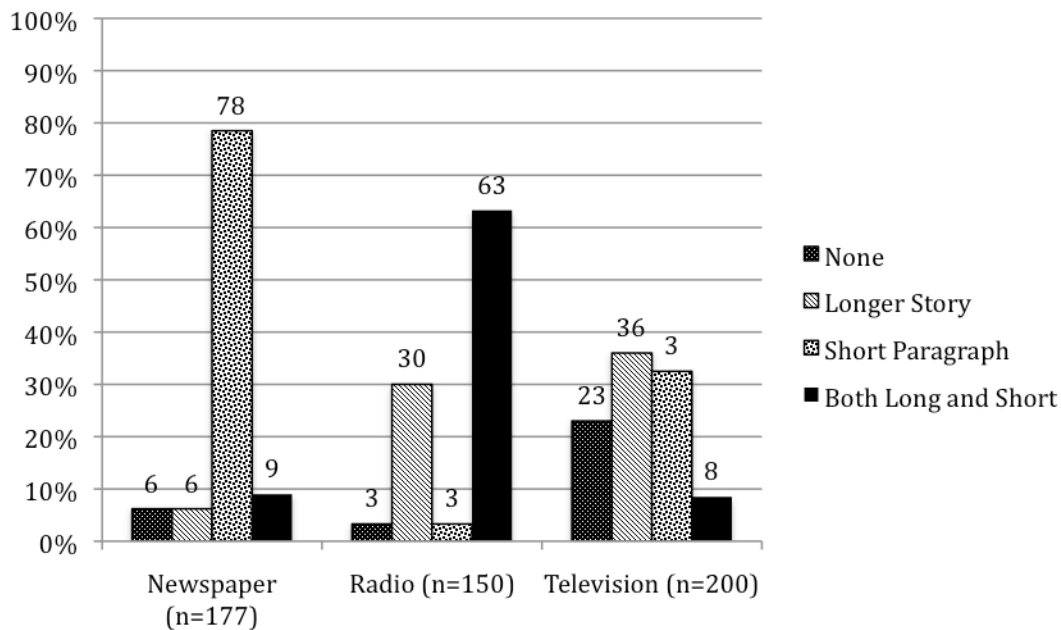
Note: Percentages may not total to 100% due to rounding.

Hypothesis 1-B

Multimedia presentation formats on newspaper websites will have a higher percentage of long-form textual use than multimedia presentation formats on radio and television websites.

The use of text as a part of multimedia presentations was examined in two ways. One variable measured the external text accompanying the visual element of the multimedia presentation and another measured the internal text. As explained in Chapter 3 (p. 52-55), external text includes anything appearing on the same page as the story. Internal text includes captions, explanations, locations, and descriptions that appear as the multimedia presentation is playing. The use of internal text occurred less than 2% of the time across all legacy media types and all multimedia presentation formats, therefore only the use of external text is reported (Figure 4.2). Variations in the use of external text were categorized as *longer story*, *shorter paragraph* or *both*. A longer story is multi-paragraph and a short paragraph is a few sentences (Figures 3.l, 3.m, 3.n on pages 52-54). The intercoder reliability coefficient for length of text was .60, which is below what is customarily considered satisfactory. As a result, this finding should be considered tentative.²⁴ The data are *not* consistent with my expectations in this case, since it was proposed that newspapers would favor longer paragraphs in keeping with traditions around the written word. Another surprise was the variation in the length of textual information on television websites. In one sense the evidence of *no text* goes along with the strong visual tradition of television. The use of the longer story accompanying the multimedia presentations on some television websites may be a pattern set before internet connections were fast enough to stream video formats.

²⁴ The inconsistency between coders likely had much to do with an unclear definition on length of text—exactly what constituted longer and shorter paragraphs. Should this variable be used in future research, there is a need to clarify the terms.

Figure 4.b

Use of textual types in multimedia presentations on legacy news media websites, in percent.

Note: N=none, LS=longer story, SP=short paragraph, B=both long and short.
Percentages may not total to 100% due to rounding.

Hypothesis 1-C

The average number of still images used in the video format of multimedia presentations on newspaper websites will be higher than the average number of still images used in the video format of multimedia presentations on radio or on television websites.

Hypothesis 1-D

The average number of still images used in the interactive format on newspaper websites will be higher than the average number of still images used in the interactive format on radio or on television websites.

These two hypotheses aimed to assess newspapers' reliance on still images even with expansion into the production of the video and interactive multimedia presentations formats. The outcomes were consistent with my expected findings. In comparison with television and radio, the results show a higher use of still images, for example, newspapers used 3.5 still images per video presentation, versus 1.8 still images per video presentation on television and radio websites (Table 4.2). To add precision to this finding

I not only recorded the number of still images used, but averaged the use over the length of the video presentation. Taking this step negates the variation in length of video presentations and it becomes clear that newspapers continue to rely on still images. The interactive format was also tested for the use of still images, but in this case the user clicks through options at a self-determined pace, so only the average number of still images per multimedia presentation was recorded. This shows a finding similar to that in the video format where newspaper websites use still images much more frequently in interactives (Table 4.3). While the numbers were far too small to draw conclusions, the results fit the expected trend.

Table 4.2
Average number of still images per *video* format multimedia presentation by legacy news media type.

	Legacy News Media Type		
	Newspaper n=121	Radio n=6	Television n=191
Still Images Used within Video Format	3.5 still images per video	1.8 still images per video	1.8 still images per video
	1.16 still images/min	.02 still images/min	.77 still images/min

Table 4.3
Average number of still images used within *interactive* multimedia presentations by legacy news media type.

	Legacy News Media Type		
	Newspaper n=12	Radio n=3	Television n=1
Still Images Used within Interactive Format	15.8 photos per interactive presentation	11 photos per interactive presentation	4 photos per interactive presentation

Hypothesis 1-E

*The multimedia presentation formats on radio websites will use a higher percentage of outside sources for still images than those of multimedia presentation formats on newspaper websites.*²⁵

More than 90% of multimedia presentations on radio websites consisted of a traditional narrated audio story accompanied by one or two still images (Figure 4.1). One test measured the origin of those still images used in the audio+adjacent image format and another measured the origin of still images in the audio slideshow format. The data from these two variables were combined for this analysis. This test sought to determine if the still image was taken by a newswriter from the legacy news organization or whether it was imported from a wire service or other outside source. The intercoder reliability coefficient for source of still images in the audio+adjacent format was .43, but in the audio slideshow format it was perfect. The first is below the standard that is customarily considered satisfactory, but the second is adequate. These two variables were combined for the analysis and as a result, this finding could be considered tentative.²⁶ The results are consistent with what was expected, since even in the radio news organizations where these multimedia presentation formats were used more often (NPR and NHPR), someone associated with the news organization took the still images in less than a fifth of the cases. By comparison, newspaper multimedia presentations use original still images 81% of the time (Table 4.4). While the numbers are quite low, this finding is one indication that personnel working in radio stations may not be asked to take even simple still images

²⁵ The sources of still images were not measured for television in this case since television news organizations show no evidence of using the audio+adjacent or audio slideshow multimedia presentation formats.

²⁶ The inconsistency between coders likely occurred with difficulty in finding any credit for a still image. Should this variable be used in future research, there is a need to clarify the best ways to find the credit line.

to supplement reporting. The trend is that still images from other sources are added later to enhance the story on the website.

Table 4.4
Source of still images in multimedia presentations by legacy news media type, in percent.

Source of Still Image	Legacy News Media Type	
	Newspapers (%) n=31	Radio (%) n=139
Medium of origin	81	16
All other sources	19	50
Unable to determine	0	34
Total	100	100

Note: This table combines the figures from outside still image sources in audio+adjacent and audio slideshow formats.

Medium of origin indicates a still image credited to a newsworker affiliated with the legacy news media organization website on which the multimedia presentation appeared. All other sources included: Associated Press, Getty Images, foreign press agencies, and other. Unable-to-determine: those still images a source credit.

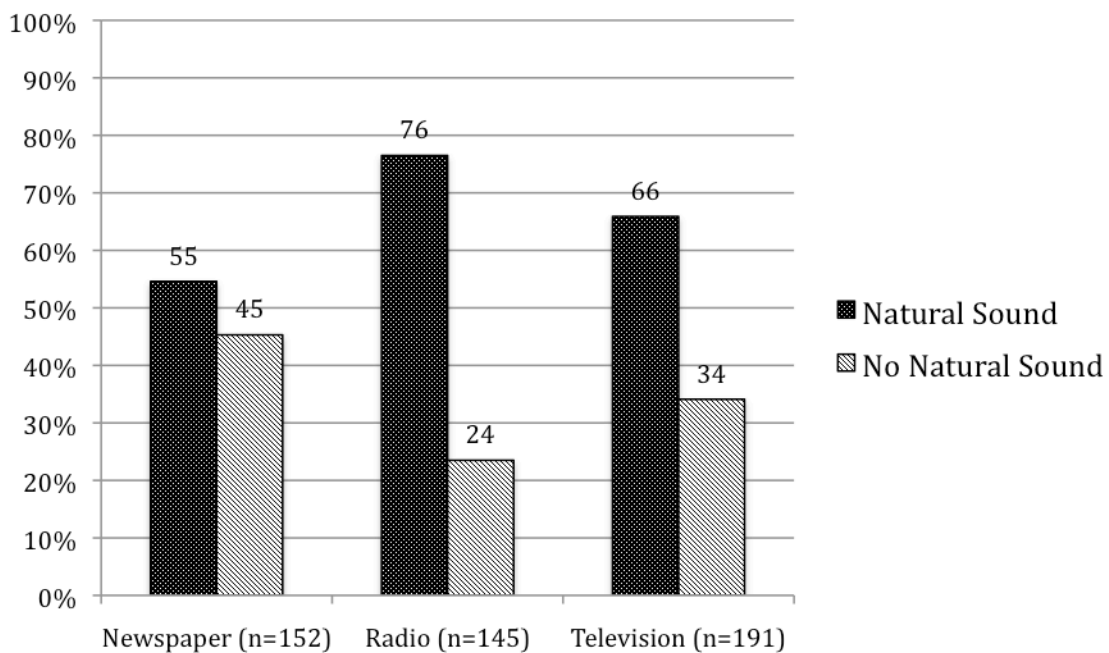
Hypothesis 1-F

Multimedia presentation formats of radio websites will contain a higher percentage of natural sound than the multimedia presentation formats of newspaper or television websites.

Radio news organizations have traditionally used natural sound—noise from a scene that helps the listener know the place—to enhance stories. Clips of sirens, clanking machinery, laughing children can all help the audience to experience the story in greater depth. This is a common technique in radio production (Bliss & Hoyt, 1994; White, 2005) and I proposed that this practice would continue in multimedia presentations produced on radio websites. This finding is consistent with the expectation, since radio

does, indeed, favor more use of natural sound (Figure 4.3). Television also uses a great deal of natural sound to orient the viewer, but the most notable result is in the number of newspapers using this technique. In over half of the cases, traditional wordsmiths and still photographers used natural sound in multimedia presentations. Perhaps this is due to the novelty of new storytelling tools, but it also indicates a place where one legacy medium is incorporating the best practices of another legacy medium.

Figure 4.c



Use of natural sound in multimedia presentations on legacy news media websites, in percent

Note: This graph combines the figures from natural sound in video, audio+adjacent, and audio slideshow formats.

Hypothesis 1-G

Multimedia presentation formats of radio websites will contain a higher percentage of music (both part of the scene and imported) than the multimedia presentation formats of newspaper or television websites.

Hypothesis 1-H

Multimedia presentation formats of radio websites will contain a higher percentage of call-ins than the multimedia presentation formats of newspaper or television websites.

The use of music and call-ins are also common practice in traditional radio production and I proposed that multimedia presentations on radio websites would use more music and call-ins than those on newspaper and television websites. Since only about 15 percent of multimedia presentations on *any* legacy news media type used music, the findings here make little difference in how these legacy news organizations compare. While radio was the only legacy news media type to exhibit the call-in characteristic, it still occurred in only 2 percent of the cases. In general some of the expected legacy characteristics of radio production (music and call-in) are not being used much at all in multimedia presentations.

Hypothesis 1-I

The video formats of multimedia presentations on television websites will contain a higher percentage of studio settings than the video formats of multimedia presentations on newspaper or radio websites.

News discussion shows, interviews, daily news round-ups often take place in television studio settings and measuring the appearance of these studio sets was one way to assess the repurposing of material on television websites (Table 4.5). The intercoder reliability coefficient for studio settings in the video format was .58, which is below what is customarily considered satisfactory. As a result, this finding should be considered tentative.²⁷

²⁷ The inconsistency between coders likely had much to do with an unclear definition of the use of a set or studio for production. In most cases the anchor lead-in to a video story was counted as a “yes” for this

The findings were consistent with the hypothesis, with television news organizations using a traditional studio setting as part of multimedia presentations in over half the cases. *The Detroit Free Press* was the outlier within the newspaper category since it made use of a studio setting in 53% of its video presentations while *The Roanoke Times* and *The Spokesman Review* never showed this characteristic, and *The New York Times* showed it only 10% of the time. In the case of *The Detroit Free Press*, this was possibly due to a partnership with a local television station and a daily news roundup presented Monday through Friday on the website. These results show radio's use of studio settings as a higher percentage than in newspapers, but the low n of 6 makes that finding meaningless. The value is reported here only for completeness.

Table 4.5
Use of studio settings in video format multimedia presentations on legacy news media websites, in percent.

Use of studio setting	Legacy Organization Type		
	Newspaper (%) n=121	Radio (%) n=6	Television (%) n=191
Yes	24	33	56
No	76	67	44
Total	100	100	100

variable, however if the anchor was not in a traditional studio it might have been missed. Should this variable be used in future research, there is a need to clarify the terms.

Hypothesis 1-J

Reporters will appear in greater percentage in the video formats of multimedia presentations on television websites than in the video formats of multimedia presentations on newspaper or radio websites.

Another test of the repurposing of on-air television material is the presence of a reporter on-camera in a video format multimedia presentation. This finding is also consistent with expectations. The numbers for radio news organizations are too small to be of any significance, but the fact that television news organizations continue to use reporters in nearly half of its video presentations is noteworthy. The “standup” or “standup bridge” is a standard television news production method in which the reporter might present a live lead-in for the story or add information in the middle of a story. It is often used to enhance an otherwise non-visual story, but it is also common to see standups used to promote the station’s reporters. Some of these multimedia presentations have not been edited at all from the on-air broadcasts, as evidenced by the “live” tag in Figure 3p in Chapter 3 (p. 56), which is a screen shot from the television station’s website taken many hours after the original news cast. The findings from this analysis reveal two main trends: Television does continue to repurpose its on-air product and other legacy news media sometimes copy this television technique (Table 4.6). Again, in this case, these results show radio’s use of a reporter to be present half of the time. Though the percentage for radio is higher than for television, the low n of 6 makes that finding meaningless. The value is reported here only for completeness.”

Table 4.6
Presence of a reporter in video format multimedia presentations on legacy news media websites, in percent.

Use of reporter	Legacy Organization Type		
	Newspaper (%) n=121	Radio (%) n=6	Television (%) n=191
Yes	26	50	46
No	74	50	54
Total	100	100	100

Hypothesis 1-K

Anchors will appear in greater percentage in the video formats of multimedia presentations on television websites than in the video formats of multimedia presentations on newspaper or radio websites.

The appearance of an anchor in a video format multimedia presentation was another indicator of television stations' habit of repurposing material from the on-air product (Table 4.7). The fact that users see an anchor on a set in over half of the multimedia presentations was expected, but a higher percent would not have been surprising. Again, the numbers for radio are too small to be relevant here, but the comparison between television and newspaper multimedia presentations is revealing. In a case similar to that of the use of a reporter, the use of an anchor on radio multimedia presentations happens in about one third of the cases. Though the percentage for radio is higher than that for newspapers, the low n of 6 makes that finding meaningless. The value is reported here only for completeness.

Table 4.7

Use of an anchor in video format multimedia presentations on legacy news media websites, in percent.

Use of anchor	Legacy Organization News Media Type		
	Newspaper (%) n=121	Radio (%) n=6	Television (%) n=191
Yes	21	33	55
No	79	67	45
Total	100	100	100

Hypothesis 1-L

The video formats of multimedia presentations on television websites will contain a higher percentage of dissolves than the video formats of multimedia presentations on newspaper or radio websites.

Hypothesis 1-M

The video formats of multimedia presentations on television websites will contain a higher percentage of special effects than the video formats of multimedia presentations on newspaper or radio websites.

The use of dissolves, wipes and other special effects are common in television editing (Baym, 2004). This characteristic may be another indicator that television continues to repurpose from its on-air product for the Web. As shown in Chapter 3 in Figure 3s (p. 60), stations often use special effects to transition between a studio and a reporter in the field. The findings are consistent with the propositions in Hypotheses 1-L and Hypotheses 1-M, since legacy television news organizations rely more heavily on these techniques. The use of digital editing software makes it relatively easy for all producers of video formats in multimedia presentations to include dissolves, wipes and special effects so it is not surprising that some newspapers are also employing these techniques in multimedia presentations, but not nearly to the extent to of television news

organizations (Table 4.8 and Table 4.9). As in other variables used to analyze the video format, the percentage for radio is higher, but the low n of 6 makes that finding meaningless. The value is reported here only for completeness.

Table 4.8
Use of video dissolves in video format multimedia presentations on legacy news media websites, in percent.

Use of video dissolves	Legacy News Media Type		
	Newspaper (%) n=121	Radio (%) n=6	Television (%) n=191
Yes	21	67	66
No	79	33	33
Total	100	100	100

Note: Percentages may not total to 100% due to rounding.

Table 4.9
Use of special effects in video format multimedia presentations on legacy news media websites.

Use of special effects	Legacy News Media Type		
	Newspaper (%) n=121	Radio (%) n=6	Television (%) n=191
Yes	35	0	50
No	65	100	50
Total	100	100	100

Hypotheses 2-A and 2-B: Multimedia use related to size of the organization

The second group of hypotheses proposed a relationship between the size of the legacy news organization and the quantity and variety of multimedia presentations produced. The fundamental thinking around this hypothesis is the relationship between access to resources (both human and technological) and the ability to produce video, audio, still images, and the material that makes up interactives.

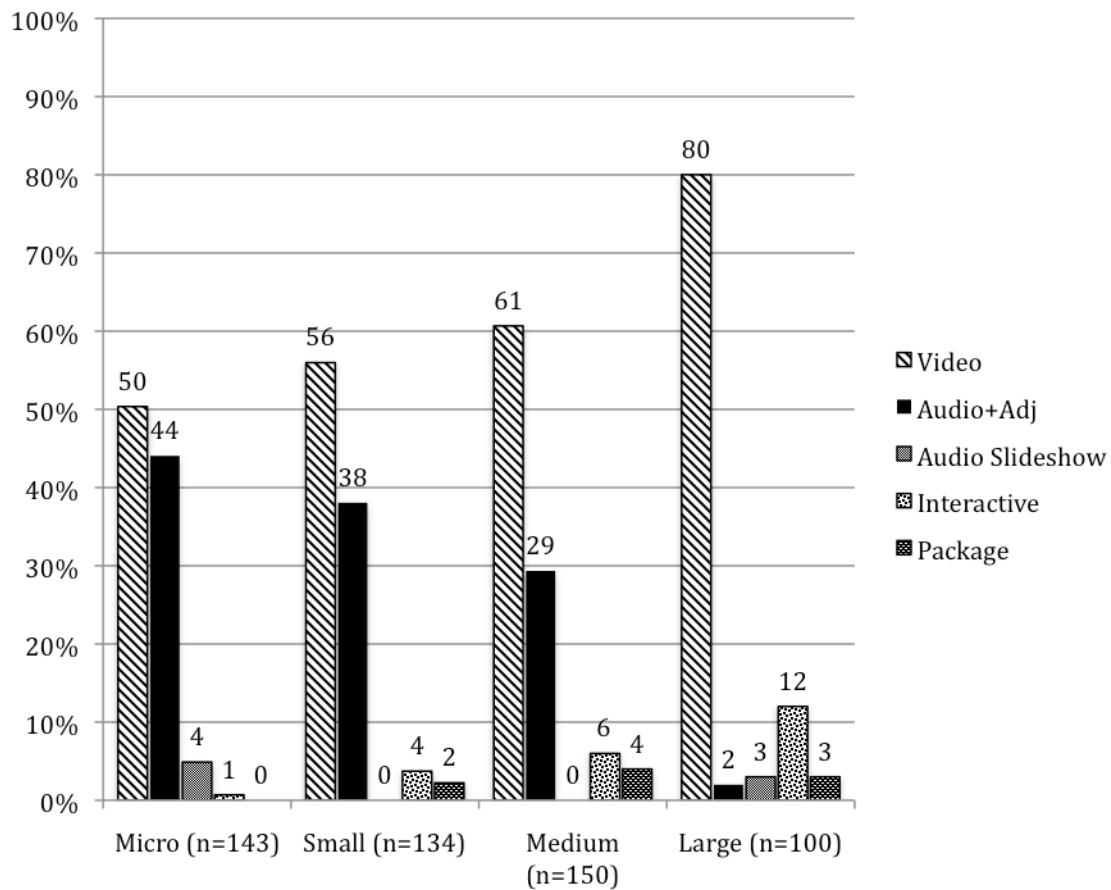
Hypothesis 2-A

As the size of the news organization increases, the use of resource-intensive multimedia presentation formats (video, interactives, multimedia packages) used on the news organization's website will increase.

Hypothesis 2-B

As the size of the news organization increases, the percentage of interactive multimedia presentations used on the news organization's website will increase.

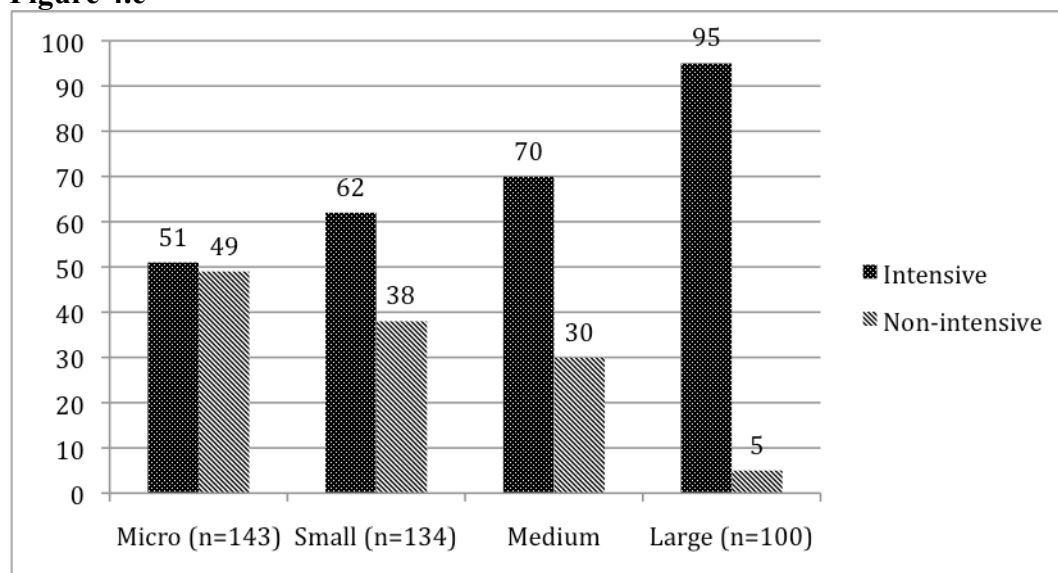
It was proposed that the larger the legacy news organization, the more it would show use of resource-intensive multimedia presentations (Figure 4.4). These findings are consistent with expectations, particularly in terms of the video and interactive formats. The number of video format multimedia presentations increased progressively in each size class. The number of interactives showed the same trend, although it makes up only about 5% of total multimedia presentations and is therefore risky to draw many conclusions. The case is similar with the number of multimedia packages since it accounted for only about 2% of all multimedia presentations. Notable are the percentage of audio slideshow presentations and the percentage of interactive presentations produced by very small and very large organizations. In terms of ease-in-posting, the audio+adjacent format is a simpler type of multimedia presentation to produce for a website, so it makes sense that the smaller legacy news organizations post more audio+adjacent presentations.

Figure 4.d

Distribution of multimedia presentation formats by size of legacy news organization, in percent.

Note: Percentages may not total to 100% due to rounding.

Clearly, the size of the organization does have an impact on the type of multimedia presentation formats that appear on legacy media websites. The more labor-intensive formats of video and interactives are less common in the micro and small organizations (Figure 4.5). Even though video presentations are considered quite time-consuming, they now appear on the legacy news media websites of news organizations of all sizes, indicating at least some trend toward providing the consumer with something beyond the standard legacy media offerings.

Figure 4.e

Distribution of multimedia presentation formats by size of legacy news organization and resource intensity in production, in percent.

Summary

Many of the quantitative findings support the hypotheses put forth in this study and show that legacy media organizations do, indeed, stick close to legacy roots when producing for websites. This legacy effect is most obvious in the fact that television news organizations produce more multimedia presentations in the video format and radio websites are dominated the audio+adjacent format. Television news organizations continue to favor the use of studio settings, the use of anchors and the use of reporters within their video presentations. Dissolves and special effects are used more frequently in television than in the other legacy media. The legacy effect also appears in results such as newspaper websites' use of a great number of still images per minute within their video format multimedia presentations. Newspapers also continue to rely on still images that originated within that organization, indicating reliance on traditional photojournalists. In contrast, radio news organizations use original still images in much smaller numbers.

The examination of types of textual information accompanying multimedia presentations resulted in the most unexpected findings. I predicted the legacy effect would result in newspaper websites using a greater number of long paragraphs, but, in fact, newspapers used short paragraphs nearly 80% of the time. Television news organizations showed the greatest variety in how text was presented, likely indicating different approaches by each different organization. MSNBC, for instance, provided accompanying textual information in only 10% of the multimedia presentations while KGW used longer paragraphs in 86% of the multimedia presentations.

Measuring the use of natural sound in multimedia presentations resulted in a more mixed set of findings. Not unexpectedly, the legacy effect holds true for radio news organizations since there is a higher use of natural sound. While this is consistent with expectations, the more unforeseen outcome was the relatively regular use of natural sound in newspapers' multimedia presentations.

The content analysis indicates that legacy news media organizations only partially embrace the ability to expand methods of information production and distribution through on the Web. The legacy effect appeared in many of the findings, but the question remains as to whether newspaper, radio and television new organizations will be able to move beyond these ingrained practices. The implications of these findings will be explored in Chapter 5, which reports on interviews with multimedia presentation producers and news organization managers.

CHAPTER FIVE

QUALITATIVE RESEARCH

The results of the content analysis describe the nature of multimedia presentations as legacy organizations make the transition to digital production and delivery of their news products. Patterns of production are evident in the multimedia presentation formats captured on the organizations' websites. To uncover some of the reasons behind these patterns, interviews with multimedia producers, website managers and digital journalism experts were required. The primary focus of these interviews was to get a sense of what is happening on the ground—how stories are assigned, how deadlines are met, and how new technology has been introduced. The interviews ultimately served to tell the stories of newswriters and news managers in legacy media newsrooms during this transition to digital news production and distribution. When presented with an outline of the data from my content analysis, some were surprised and some rather resigned, but all the interviewees were honest about both their frustrations and their hopes as they work to move their legacy news organizations into a new era. This chapter begins by outlining previous online journalism research that concentrates on organizations, and based on that research, poses three research questions. Next it briefly describes the methods used to select interview subjects, and finally, it summarizes and analyzes the interviews.

QUALITATIVE LITERATURE IN MULTIMEDIA

There are volumes of literature dealing with technological change and its effects on established organizations, relationships and structures. Media companies have many of the same issues as medical institutions, manufacturers, and human service organizations when it comes to workers and their acceptance

of workplace change (Barley, 1986; Bechky, 2003; Sandfort, 2003). Newswriters resist the changes in routines, changes in management expectations, and changes in deadlines that accompany the introduction of new technologies (Deuze, 2006; Pavlik, 2000a; Zavoina & Reichert, 2000). The practices of deciding on the daily story agenda, gathering information for those stories, and producing those stories in print or on tape are disrupted by distribution on the Web. The following section reviews the research that deals specifically with the issue of adding multimedia presentations to daily journalism.

Prior to some major changes in newsrooms during the early 2000s, Boczkowski examined three pioneering newsrooms in the late 1990s and published his full findings in 2004. As he did ethnographic research with *The New York Times*' Technology Section, *The Houston Chronicle*'s Virtual Voyager and New Jersey Online's Community Connection, Boczkowski observed that while all three had their roots in the newspaper business, and all were experimenting with online multimedia presentations, and organizations' experience were quite different. Through this work he concluded that newswriters in successful online endeavors did three things well:

1. They limited their association and alignment with the traditional print newsroom.
2. They turned away from their traditional gatekeeping roles toward greater dialog, with an aim toward engaging viewers and readers.
3. They were aware of the technical savvy of their audience and the potential for user-generated content.

A strong identity in print or broadcast and a strong gatekeeping role were the historic hallmarks of newsrooms, but Boczkowski's findings reflect poorly on these entrenched practices when it comes to moving onto the Web and into multimedia production. In the 10 years since Boczkowski's research, many organizations have made shifts in their structures and work practices to accommodate production for the Web and this is evident in the increase in multimedia presentations available on legacy news websites.

Boczkowski's work, however, suggests that it is challenging—perhaps impossible—for legacy media to shake free of their roots and take full advantage of online tools. His work in the late 1990s marked the beginning of more specific research into the organizational shifts that accompanied the move to distribution on the Web

2000-2005

As mentioned in Chapter 2, the Media General properties in Tampa, Florida—The *Tampa Tribune*, WFLA and TBO.com—were merged into one newsroom in March of 2000. The radical reconfiguration of these three entities prompted several scholars to examine the Tampa newsroom. These studies begin to explain how an organization's structure can help or hinder advances in the online environment in general and in multimedia production specifically. The vision for the News Center in Tampa was to use all journalists on all platforms, with WFLA-TV reporters writing for the paper and *Tribune* reporters appearing on television (Dupagne & Garrison, 2006; Garrison & Dupagne, 2003; Lawson-Borders, 2006; Silcock & Keith, 2006; Singer, 2004; Stone, 2002). A significant finding in these studies was the fact that multimedia storytelling was taken into consideration in story assigning and coverage. Journalists felt they were thinking

differently about how to cover stories and this was bringing more efficiency and camaraderie to the newsroom. When respondents were asked about skills needed in the future, they emphasized knowledge of multimedia production and versatility in writing for different platforms (Dupagne & Garrison, 2006; Thelen, 2002). While these studies conveyed a certain optimism in Tampa in these first few years, one media observer recently looked back and called the hybrid newsroom model a failure, making this assessment:

Instead of combining the assets of the newspaper and TV station in a single, dynamic website, TBO.com is primarily a compendium of cheesy police news and out-of-market AP stories. If you follow the breadcrumbs on the website to the separate pages for the TV station and newspaper, you get nothing more than the sort of shovelware that populates the website of a mediocre broadcaster or publisher in a mid-sized market. (Mutter, 2010, p. 1).

Other studies of the time period applied diffusion of innovation theory in separate studies of several newsrooms (including Tampa's) and concluded that most journalists saw clear advantages to new practices for the Web (Lawson-Borders, 2006; Rogers, 1995; Singer, 2004). However, Singer noted that the converged newsroom model, and the multimedia practices within it, was ultimately hindered by technological differences and often by the cultural differences between print, television, and online newsgathering. Cross-training all newswriters to do the jobs of reporter, photographer, videographer and sometimes multimedia editor was the lofty goal at Gannett when it renamed all of its newsrooms "Information Centers," but it proved to be only marginally successful (Clark-Johnson, 2006). Lawson-Borders' (2006) research found a strong influence from established newsroom cultures in the adoption of new

practices as she looked at A.H. Belo Corporation (WFAA and *The Dallas Morning News*) and Tribune Company (WGN TV, WGN Radio and *The Chicago Tribune*). Her conclusion was that convergence (and adoption of multimedia presentation formats) cannot be introduced in a cookie-cutter fashion but must take an approach that meets the needs of the market. Multimedia presentations require a new set of skills, says producer Adrian Phillips of TBO.com in Tampa.

Multimedia journalism allows the opportunity to give the end user the opportunity to get information in a variety of different mediums,” he explains. “What that means is thinking bigger than we have in the past. It's personally exciting, but more difficult. It is the combination of still images, video, audio, text, that takes multimedia journalism to a different level than other mediums” (Stone, 2002).

2006 and Beyond

By 2006, as legacy news media organizations were rushing toward online video, the scholarly work starts to more closely examine the meaning of the term “multimedia” as defined by newswriters. In a review of online journalism scholarship in Europe and the United States, Domingo (2005) notes that many studies up to this time were too centered on newspapers and their particular journalistic cultures to be of much use. He did conclude, however, that multimedia presentations were getting more attention from researchers. The arrival of multimedia presentations in online journalism as a whole poses larger challenges for publishers and broadcasters. Singer calls it a “major management challenge” to overcome the cultural resistance to a multimedia newsroom, but sees hope that the transition is under way in most organizations (2008, p. 122). Her research points out that journalists are learning to tell stories in ways that take advantage of the new tools. Singer also notes, somewhat ironically, that even as journalists are

learning the new tools, many companies (most recently CNN) are shifting to non-staff “citizen journalists” to do much of their local newsgathering.

Research in Great Britain and Europe accelerated between 2007 and 2010, examining news organizations on the cutting edge in multimedia production. Thurman & Lupton (2008, p. 453) note that the BBC, *The Guardian*, *The Lancashire Evening Post* and *The Daily Telegraph* all made significant investments in multimedia resources, and their study reveals “a high degree of experimentation” by these companies. As little as two to three years ago, researchers continued to see news organizations trying to find a new path in this environment. Doyle (2010) examines the economies of scale and audience value in the multi-platform approach instituted by the UK television industry. Called a “360-degree strategy,” it is an attempt to consider all distributive outlets from the earliest phase of coverage. She points out that much of the multi-platform distribution from British television news is “recycled” for use on websites and any movement beyond broadcasting seems to be largely a defensive position. In other words, it is assumed that all legacy news media must be on the Web, so these broadcasters answer with a presence, but do little in any way to change the content or production values from the original broadcast product. Doyle and her research subjects ultimately point to a conundrum in most legacy news organizations. Each must continue to meet audience and advertiser demands in traditional forms of distribution, but must do so while trying to expand production of multimedia presentations on the Web. To add greater complexity, all legacy media are attempting this in a time of diminishing revenues from the legacy media product (Pew, 2011). The research indicates that most legacy news organizations are encouraging newswriters to produce multimedia presentations, but the underlying tone

is that it cannot be at the expense of the moneymaking legacy product. Legacy media are stuck being the old companies in what Clayton Christensen (2000) calls the “innovator’s dilemma.” This is described as the ability of an established business to handle sustaining innovation—those changes that improve upon the product for the current market—like the addition of computer-aided reporting and digital photography in legacy news media organizations and simultaneously adjust to disruptive innovation—those things that alter the market itself. The market for news and information is a radically different place today and newswriters, news managers, and media pundits wonder if legacy media will keep pace. This review of research on organizational change prompts the first two research questions:

RQ1: How do legacy media practices influence multimedia processes and presentations?

RQ2: How do companies’ institutional and organizational histories contribute to the making of multimedia format and characteristics choices?

Organizational development practices in newsrooms do not fit within broader business norms that emphasize teamwork in achieving product and market goals. Gade (2004) suggests a unique struggle in newspapers between the values of marketing and the values of journalism. According to other researchers, early socialization in newsrooms is a strong influence on professional practice in the journalism culture (Schudson, 2003; Shoemaker & Reese, 1996). It is therefore suggested that these strong journalism values likely to contribute to the production practices in multimedia presentations. Case studies and media-specific studies have covered news organizations’ adjustments to new technology, but few have sought to look at multimedia presentations across media types (Johnsen, 2004; Robinson, 2007; Singer, 2008). In the same way, a few studies over the

last two decades have asked what students need to move into this fast-changing media environment, but few have asked specifically about the educational and professional backgrounds of online decision-makers (Russial & Wanta, 1998). Those currently working in these legacy organizations came into the business within traditional journalism education and in traditional legacy news workplaces, prompting the third research question.

RQ 3: How do the online decision-makers' educational and occupational origins in print, radio, or television influence the formats and characteristics of their news organization's multimedia presentations?

QUALITATIVE METHODOLOGY

A total of 24 interviews with producers, website managers and newsroom managers were conducted between June 18, 2010, and November 9, 2010, via email, phone, Skype, or in-person, and were recorded on a digital voice recorder. All interviewees gave either verbal or written permission for the conversation to be recorded for research purposes as required by the University of Washington's Institutional Review Board standards.²⁸ Interviews ranged from 30 minutes to 80 minutes. The principal researcher transcribed all audio material for analysis.

The interview subjects were introduced to the core questions of the research during initial contact via email or phone and were given a more detailed description in opening introductions during the interview. It was most convenient and relaxing for the interviewee to begin the conversation with his or her history in multimedia production. These exchanges led easily into a timeline of their organizations' adoption of multimedia

²⁸ Exemption Category 2 - (45CFR46.101 (b)(2))

production practices. All questions were aimed at providing information relating to the core questions of the research:

1. How do they see traditional legacy media practices and processes influencing the formats and characteristics of multimedia presentations?
2. What do they see as the influence of institutional and organizational histories upon the formats and characteristics of multimedia presentations?
3. How do they think that their own educational backgrounds and early professional histories in print, radio, or television have influenced the production of multimedia presentations for their websites?

Selecting Interview Subjects

As multimedia presentations were collected during the content analysis phase of this project, all names listed in credits and bylines on the multimedia presentations were added to a list of potential interview subjects. Eventually the search for additional interview subjects expanded to include staff listings on the websites of the legacy news organizations in the study. The objective was to seek out people at every level of the news organization who might have an influence on the production of multimedia presentations. The list started with a search for titles such as “multimedia producer,” “online producer,” and “web journalist.” Some websites do not make their staff lists readily available, so potential interview subject names were also collected through phone calls and occasionally through personal connections. These job titles were the most likely to lead to those producing the multimedia presentations for these news organizations’ websites and they, in turn, could refer other managers. This initial search produced approximately 25 names and 10 (initially one from each news organization in the study)

were contacted through emails, phone calls, or contact forms on websites. These resulted in at least one interview from 10 of the 11 news organizations²⁹ (Table 5.1).

Table 5.1
Interview Subjects - Multimedia Presentation Producers

Interviewee	Job Description	News Organization	Interview Date
Nancy Donaldson	Senior Multimedia Producer ³⁰	<i>The New York Times</i>	June 28, 2010
Connie Kim ³¹	Web Producer	KCBS Radio	July 30, 2010
Brady Carlson	Web Producer	New Hampshire Public Radio	August 5, 2010
Frank Mungeam	Director of Digital Media	KGW Media Group	August 30, 2010
Colin Mulvany	Photojournalist, Multimedia Producer	<i>The Spokesman-Review</i>	September 4, 2010
Eric Seals	Photojournalist and Multimedia Producer	<i>The Detroit Free Press</i>	September 7, 2010
Robert Hood	Director of Multimedia	MSNBC.com (Redmond, WA)	September 22, 2010
Megan Martin	Online Editor	<i>The Roanoke Times</i>	October 11, 2010
Keith Jenkins	Senior Producer for Multimedia	National Public Radio	October 25, 2010
Susan Bock	Online Manager	YNN Cable Television	October 25, 2010

Semi-structured interviews were conducted with these 10 newswriters in order to start with those who produce multimedia presentations on a regular basis. From there further interviews with other personnel within those organizations were arranged using snowball sampling—that is by interviewing people suggested by the initial interviewees (Babbie, 1983). The snowball sample also helped avoid limitations brought about by the high turnover rate among those who work on legacy news media websites. Additionally,

²⁹ CNN was contacted but refused to participate.

³⁰ All job titles provided by interviewee.

³¹ Interview conducted via email.

an attempt was made to interview at least one staff member in each news organization who has retained a traditional title (reporter, photojournalist, editor) and who worked primarily on the legacy news product. The first 10 interviewees suggested the names of photographers and reporters who fit this description. In almost every organization studied, the majority of the staff is still involved in production of the legacy product, so an attempt was made to narrow the list by asking for a reporter, photographer or producer who had easily grasped the production of multimedia presentation material, as well as one who had been resistant to the changes. This produced connections to 10 more potential subjects, six of which resulted in interviews (Table 5.2).

Table 5.2
Interview Subjects - Producer-referred

Interviewee	Job Description	News Organization	Interview Date
Mike Rollins	Web Staff Writer	KGW Media Group	June 18, 2010
Aron Pilhofer	Interactive News Editor	<i>The New York Times</i>	June 28, 2010
Kathy Kieliszewski	Photojournalist and Multimedia Producer	<i>The Detroit Free Press</i>	September 9, 2010
Shannon Mullen	Freelance Reporter	New Hampshire Public Radio	September 10, 2010
Katie Gibas	Reporter	YNN Cable Television	November 3, 2010
Lacey Johnson	Anchor/Reporter	YNN Cable Television	November 8, 2010

In the end, interviews were conducted with 15 producers of multimedia presentations.

Interviews were conducted with five subjects who were in higher managerial roles (managing editor, news director, general manager). These interviewees were also contacted through referrals from producers (Table 5.3).

Table 5.3
Interview Subjects - Legacy News Organization Managers

Interviewee	Job Description	News Organization	Interview Date
D.J. Wilson	General Manager	KGW Media Group	June 18, 2010
Rod Gramer	News Director	KGW Media Group	June 18, 2010
Andrew Devigal	Director of Multimedia	<i>The New York Times</i>	June 28, 2010
John Forcucci	Vice President – News & Digital Media	New Hampshire Public Radio	September 27, 2010
Stokes Young	Director of Multimedia	MSNBC.com (New York, NY)	September 27, 2010

By asking interview subjects to suggest others who are influential in the field, six more potential candidates were contacted and three were interviewed. All three have appeared at a variety of workshops and panels discussing the future of legacy news media (Table 5.4).

Table 5.4
Interview Subjects - Multimedia/Web Experts

Interviewee	Job Description	News Organization	Interview Date
Mark Briggs	Author – <i>Journalism 2.0</i> and <i>Journalism Next</i>	Currently Director of Digital Media, KING Broadcasting	November 5, 2010
Tracy Record	Owner, Editor	West Seattle Blog	November 8, 2010
Tom Kennedy	Professor – Syracuse University	Former Managing Editor/Multimedia, WashingtonPost.com	November 9, 2010

Interview themes

Within these semi-structured interviews the questions were originally organized around seven topics and were then tailored to each participant's expertise. These questions laid the foundation for answering the three broad research questions asked in this qualitative chapter. To answer the first research question (RQ1), which asked how legacy media practices influence multimedia process and practices, I asked each interviewee how the

practices at their specific legacy news organization influenced the multimedia presentations on their websites. To answer the second research question (RQ2), which asked how companies' institutional and organizations histories contribute to the making of multimedia format and characteristics choices, I asked several types of questions. The first asked about the history of technological changes in a news organization, and the organization's initial move to the Web and eventually into producing multimedia presentations. The next question that helped answer RQ2 concerned the organization's history in the training of newswriters. This question attempted to capture an organization's attitudes toward the value of formal training. I wanted to know if newswriters were made to feel at ease with new technology and therefore more likely to use it for creating multimedia presentations. I also asked each interviewee about the acceptance of individual entrepreneurialism within their organization. This also helped answer RQ2 by exploring whether institutions that have historically encouraged entrepreneurialism will likely do so as newswriters move past legacy practices and into production of multimedia presentations. Also related to RQ2 was a question about risk-taking. This asked interviewees to talk about more of an institutional attitude toward media competition and how that might have influenced a move toward production of more multimedia presentations. The last set of questions dealing with the broad organizational history question concerned the economic climate of the interviewee's workplace and how the tightened budgets of legacy newsrooms affected the opportunity to produce multimedia presentations. Finally, in order to answer the third research question (RQ3), I asked each interviewee about their own educational and professional

history in order to assess any individual influences on the production of multimedia presentations.

In seeking to answer the three broad research questions, I created a framework of interview questions around the following themes:

1. *Legacy medium influence.*

Ultimately this research seeks to know whether an established legacy news organization can pull away from its roots enough to produce truly new forms of material for its website. The questions asked multimedia producers and managers to reflect on the influence of these roots: Do you think the multimedia presentations on your website reflect the practices of your legacy medium? Have particular groups of journalists been asked to produce multimedia presentations while others have not? Are photographers being asked to report? Are reporters asked to take photographs and shoot video? Does your rootedness in print, radio or television make it harder to produce material in another medium?

2. *Technology adoption.*

A news organization's willingness to devote time and resources to stepping beyond its traditional legacy media practices can often be seen in its history of new technology adoption (Rogers, 1995; Singer, 2004). Typical questions around technology included: Describe the online history and the history of multimedia development within the organization. How willing was the organization to move to online and then into multimedia production? Was the organization early or late to adopt online editions and programs? How is new technology perceived in the news organization—with excitement or trepidation? Were the changes somewhat

organic—begun by someone in the rank-and-file trying something new—or did management mandate the change? Is there a perception of technological prowess among employees?

3. *Training practices.*

Journalists working in legacy media organizations have generally been trained in a particular branch of media practice—broadcasting, print, photojournalism—and therefore most need additional training or retraining as they shift to distribution via the Web (Burrell, 2006; Deuze, 2001; Johnson, 2001). Questions concerning training sought to evaluate the degree to which shifts to multimedia presentations were helped or hindered by mandated training or lack of any training at all. The following questions were posed: Has a particular type of training (or lack of training) led to particular processes in multimedia presentation production in your organization? Was a consultant involved in this training and did they recommend specific practices to employees? Were all employees encouraged to get training with the new technology, or was it left to particular groups?

4. *Entrepreneurialism.*

Related to the adoption of technology is the entrepreneurial attitude within an organization (Quinn, 2005; Singer, 2004). The questions asked about entrepreneurialism included: How has the addition of multimedia presentations changed the way a story is assigned? Are newswriters encouraged to consider multimedia news gathering techniques while in the field? Is the thinking different around how to present a story now that the content is on a website, and there is

opportunity to offer it in different formats? Does your news organization *feel* entrepreneurial?

5. *Risk-taking.*

Closely related to an entrepreneurial climate is the organizational and individual attitude toward risk-taking. Some of these questions relate to Boczkowski's (2004) findings from his study of three newspapers, in which he found that the staff and managers' acceptance of multimedia presentation production was heavily influenced by the organization's technological history and institutional culture of risk-taking. This line of questioning looks outward, toward the competition among various media organizations: Have journalists and managers felt influenced to enter into multimedia presentation production by a more competitive news environment? Do the newswriters now feel more globally competitive with other media outlets? Do they feel more competitive across media types—where in the past television stations raced against other stations, newspapers pressed for the big investigation—are newspapers, radio and television now racing to post to their websites first?

6. *Economic influences.*

Many well-intentioned news organizations scaled back on multimedia production as the global economic crisis began in the autumn of 2008. While this line of questioning was not included in early research proposals, it became clear that the diminishing resources in all news organizations were squeezing out the commitment to producing material for websites. Therefore each interview subject

was asked to comment about economic pressures within their newsrooms. Have financial struggles had a positive or negative influence on the types and amounts of multimedia produced? Have there been layoffs of staff members who contributed to multimedia presentations?

7. Backgrounds.

Questions about the journalists' backgrounds pursued the following themes: Has your background (in print or broadcasting) influenced the production of multimedia presentations within your organization? What are your perceptions of how your background in print or broadcast has influenced how you produce multimedia presentations? How do you see your job changing in the next five to 10 years and how different will that be from your training?

The 24 interviews yielded 16.5 hours of audio, which was then transcribed to enable analysis. TAMS Analyzer was used to code and sort responses into 16 respondent themes (Weinstein, 2008). These themes helped in sorting and ultimately in analyzing the interview data (see Appendix IX for full list and explanations).

QUALITATIVE FINDINGS

Given the general trends in journalism and the myriad of panel discussions, blogs and workshops devoted to digital evolution, many of the interview subjects had already given a great deal of thought to their work and to their places within the shifting landscape. The interviews all began with the same framework of questions as mentioned above, but frequently veered into personal reflection and opinion. This resulted in a rich

snapshot of how those working in of daily production for the Web see their jobs and their workplaces. The comments from subjects who are in management positions presented a view more removed from the day-to-day operations of the newsroom, and finally, the observations from experts took another step back from the newsroom.

As the interviews were transcribed and analyzed, answers clustered around eight themes, some of which were closely related to the initial questions outlined above, and some of which opened new subjects for analysis. Interviewees spoke about physical spaces in legacy newsrooms, about the integration of new technologies, and about formal or informal training that accompanied that integration. They spoke of trying to make changes in daily assignment patterns and deadlines. They talked about how they assess audiences on the Web and ultimately how to generate revenue from those audiences. All who were interviewed related stories of how the legacy news products continued to take priority over producing multimedia presentations for a website. However, some interviewees also spoke of the freedom to be entrepreneurial and how their news organizations were taking risks. And finally they shared some of their educational and early work histories.

Physical spaces and places at the table.

News organizations have made adjustments to new technologies and story-telling techniques throughout their histories, but most adjustments affected individual newswriters more than the overall structure or end product. In these transitions, some jobs were eliminated and others redefined, but newspapers were still printed on paper, and control remained centered in a physical location called a newsroom (Carter, 1984).

The move to digital news production and delivery changed the landscape in more dramatic ways.

The shift to online publication and the addition of multimedia presentations altered even the physical layout of news operations. Many news organizations located their online production staff, or “dot-coms,” completely outside of the newsroom environment. Thus, as online distribution began there was a perception of separateness by both traditional newswriters and by the new Web employees. Interviewees talked about the new physical spaces as if those spaces were add-ons, not really part of the newsroom at all. In many cases they felt this physical separation contributed to slow adoption of multimedia presentations. This was quite common even within the organizations that are recognized for their expertise in multimedia. Megan Martin, Online Editor of *The Roanoke Times*, tells of her newspaper’s dot-com history:

A long time ago, back in the 1990s, Roanoke.com was actually in a separate building down the street. It was down the street and across the way by the police station, and then they moved into the basement here and then into a room that was the showers for the pressmen, so we’re taking over that part of the legacy – then they moved into another room that was part of the mail room – same *floor* as the newsroom, but still separated by giant walls and doors. Then they moved into a corner of the newsroom, so it was sort of like slowly inching into the newsroom. Then about 2005 or ’06 they moved into the center of the newsroom and now we’re right there in the center with a space on the metro desk. We’ve infiltrated by now. So you could see the aesthetic migration as well as the physical migration, that’s kind of how I think about it. The physical silos are not there, there are some mental silos left I think but for the most part the physical silos have gone (M. Martin, personal communication, October 11, 2010)

Even in her description of making progress, Martin comments about her team as a separate entity and uses the term “infiltrated,” pointing out the continued division between legacy and digital even in the minds of those on the multimedia teams. This runs counter to what Boczkowski found in his three case studies where limited association

with the legacy newsroom seemed to encourage innovation. In this case it may be that *The Roanoke Times* is a much smaller paper and the physical distance certainly could have caused those in the legacy newsroom to simply forget about the Web staff. It is also possible that a decade later there is greater acceptance of web producers as part of the journalistic staff.

Job titles, department titles and organization charts also contribute to the perception that the online business of a legacy newsroom is somehow “other.” When new newswriters are added to the organization there are inevitable shifts, but even as management makes an effort to change the culture by modifying language, the old monikers hold on. Frank Mungeam, Director of Digital Media at KGW Media Group, noted, “Our GM (general manager) two years ago started calling us KGW Media Group instead of KGW TV— people in the newsroom just call us “dot-com.” However, Mungeam did point out that progress is being made in getting a seat at the planning table when it comes to allocation of resources. He comments on the structure within KGW Media Group stations and their parent company, A.H. Belo Corporation.

The only places [stations] where they do a little bit better – not hugely better – is when digital sits at the table next to the TV news director and they both pitch the big boss. As opposed to the scraps that are left over – you’re both at the table and everybody makes their case and the GM decides [on priorities] (F. Mungeam, personal communication, August 20, 2010).

According to Mungeam, A.H. Belo Corporation is moving toward this model with about one-third of its television stations, but it is not clear that it is doing the same in its newspaper newsrooms. As a whole the interviews indicated good efforts to change physical spaces, meeting practices and organization charts in order to incorporate the online staff into the legacy staff, but some psychological walls still remain.

Technology training on the job

Another factor shaping news production and multimedia is the type of training—formal or informal—provided to journalists as they try to come up to speed on new technologies. Are legacy practices of the news organization conducive for training newswriters who are traditionally divided into “word people” and “visual people?” The education and training of print and broadcast journalists took place in journalism schools for many decades, but the emergence of digital tools required legacy news organizations to train newswriters in new storytelling techniques and new equipment. Thus the training procedures once left in the hands of universities, now often take place in legacy newsrooms. The practices range from catch-as-catch-can to quite formal, but there is no question that journalists are being called upon to use more and more tools to cover their stories. Where once a pen and pad, camera or recorder would do, the journalist employed by a legacy media organization today must be well versed in skills that can bring multimedia to websites. The way a news organization incorporates training can instill confidence or fear, particularly when newswriters are asked to put down their legacy tools and add new tools to their bags. The legacy effect—how past practices influence multimedia production—can be powerful when it comes to training newswriters to expand their skills. Many interview subjects mentioned fears among newswriters when writers are asked to take photos and still photographers are asked to record sound. Some adjust to the new tools and some resist, but newswriters must be trained to see stories differently. Colin Mulvany, Photojournalist and Multimedia Producer at *The Spokesman Review*, comments:

You have the ability to push a button to shoot the still but also record video and then mixing and matching those two different mediums and

sometimes it works and sometimes it doesn't but I'm seeing this—that still photojournalists are bringing this new aesthetic to video storytelling—mixing and trying to make them work. They don't want to give up the power of the still image because they haven't quite transitioned to the idea of telling a story completely with video (C. Mulvany, personal communication, September 12, 2010).

The Gannett-owned *Detroit Free Press* struggled to reconcile its process with what the parent company prescribed for training. For example, the photojournalists there were already experiencing a more organic growth in producing multimedia presentations. Kathy Kieliszewski, Photojournalist and Multimedia Producer at *The Detroit Free Press*, speaks of her own staff:

It [training] has evolved over time—when Gannett came in and wanted video, they saw in a very different way than what we envisioned and what we as the visual journalists wanted to do. They thought it was going to be *all* the journalists in the newsroom participating [in video] in some fashion, but I would say the majority of the stuff we know is self-taught. Some have gone to Oklahoma [National Press Photographers' Association Video Workshop], we had the Gannett training, I was doing some training, but Eric [Seals] is self-taught, Mandy Wright [both traditional still photojournalists] is self-taught. We really are a nice community of people who share knowledge with each other (K. Kieliszewski, personal communication, September 17, 2010)

Formal training is built into the newsroom structure of some legacy media organizations and newswriters are required by management to participate. In other legacy media organizations it is laissez-faire, with newswriters seeking training online, through professional organizations, or simply by trial and error. Training practices and attitudes impact the quantity and quality of multimedia presentations since newswriters who are confident in handling their equipment are more likely to push for and produce good quality multimedia presentations. The training initiatives at KGW Media Group are led by Mungeam who says, "That's kind of been my passion—to recognize that digital is its

own medium and how do you do story-telling in a digital space, how is that different from storytelling on TV?" (F. Mungeam, personal communication, August 20, 2010)

Training procedures at National Public Radio were much more formal, largely due to a grant from the Knight Foundation. Keith Jenkins, Senior Producer for Multimedia, points out that the training was stopped and started a few times before NPR settled on a multimedia presentation production process more suited to its radio roots.

At first they [Knight] were very traditional in that sense that they threw a cookie-cutter approach in there that journalists would be taught how to build things in Flash and how to shoot and edit video—a lot of it looked like what newspapers were trying to do at the time and for the most part none of those things took into account the basic nature of the organization [public radio]...[in the end] we got rid of Flash and video. We ended up introducing much stronger audio slideshows and in essence created a much stronger visual component to the training. We tied it very closely to the skills they already had as audio storytellers. Overall it was about a year and half of training. Not everybody got the full five weeks, but most of the front-line reporters and producers got the full five weeks and there was a second tier who got a one-week training program. Management and some of the more senior producers ended up with a two-day training. The goal was to make sure everybody got something (K. Jenkins, personal communication, October 25, 2010).

Answers to questions around training revealed a wide breadth of practices in the news organizations included in the study. Few conclusions in the way of best training practices can be drawn from looking at the comments of these interviewees, but they did agree that newswriters seemed more enthusiastic about working on multimedia presentations when they had experienced good training from like-minded co-workers or from professional organizations. Many newsrooms were initially led into multimedia production by a single individual who took some initiative to create material for their news organization's website. The more formal training demanded by higher-ups was met with more skepticism.

Deadlines, assignments and the legacy priority.

The ten-o'clock assignment meeting is a standard in many newsrooms and is the first step of gatekeeping for most legacy news organizations. In their legacy configurations, the space and time for news are limited. Managers and editors make decisions on what to cover and how to cover it with the human and technical resources at hand. Standard procedures in assigning stories determine which reporters and photographers are available at a given hour and how much time they have to produce a story before the regular legacy deadline. In almost every case the workings of the morning meeting have not changed in light of online distribution and multimedia production. In fact, most who were interviewed talked of the “afterthought” feeling in most daily decision-making. The decisions made in those morning meetings appear to have an impact on the volume and types of multimedia presentations produced. Interviews with those from *The New York Times* and MSNBC, suggest they may be the exceptions to this “afterthought” tendency, but the reaction from most online newswriters is telling. Michael Rollins, a web staff writer for KGW Media Group, points to the gap: “...they sit in here every morning and say ‘what is the absolute best *broadcast* story we can do?’ And when they sit in here and go ‘what’s the very best story we can do for broadcast *and* what’s the very best story we can do for online’ – then you’ve got something. That’s not there yet” (M. Rollins, personal communication, June 5, 2010). Interestingly his boss Rod Gramer, KGW Media Group News Director, sees the situation quite differently:

I have [broadcast] assignment editors that write for the Web, sometimes on weekends we don’t have one of the full time web people here and the assignment desk has actually broken the stories on the Web. So it’s that integration of resources that makes it not a staff of four working for

KGW.com, but a staff of dozens and dozens working for KGW.com (R. Gramer, personal communication, June 5, 2010).

Perhaps because of rapidly shrinking revenues, newspaper newswriters reported more openness in the morning meetings and in the move toward multimedia. Mulvany,

Photojournalist and Multimedia Producer at *The Spokesman Review* commented:

I would help them [editors] be educated and they got better at it after awhile with me helping to shape that conversation. It was also me trying to find things for people that would make good multimedia. There was always time to talk about multimedia in the ten o'clock meeting. I'd sit and we'd say "what are the potential mm stories" that was great – I could bring that conversation together (C. Mulvany, personal communication, September 12, 2010).

Nancy Donaldson, *The New York Times* Senior Multimedia Producer, says the thinking within their newsroom has evolved to the point where, "...a lot of the time people on the desks will come to us and say – 'we have this big enterprise story coming up – let's collaborate,' so we'll partner with who ever is on that desk" (N. Donaldson, personal communication, June 28, 2010).

Managers interviewed tended to feel that they were doing a great job of including their website producers in all decision-making and assigning, but the producers felt that in day-to-day stories the priority was always given to the legacy product. Most of the front-line web journalists agreed that when journalists in newspaper, radio and television newsrooms begin to think of stories first in terms of what will appear on the Web and *then* what will appear in the legacy product, there will be some evidence of change.

Legacy audience versus website audience.

Multimedia producers and their managers are clearly concerned with quantifying the audience for multimedia. Legacy media organizations have long histories of tracking

readers and viewers, but their methods provide little specificity. For instance, Nielsen and Arbitron ratings make it possible for broadcasters to know the general demographics of their audiences for specific programs. Newspapers rely on circulation statistics to provide advertisers with the audience for their print product. Neither method affords the minute detail that comes with analyzing website traffic on media websites (Web Analytics, 2011). Adjusting to new procedures for measuring audiences on the Web is a challenge for both the legacy media managers and for advertisers since advertising can be targeted more specifically, because users' habits have changed radically. Mark Briggs, author of *Journalism 2.0* and *Journalism Next*, commented on this shift for all in legacy organizations: "Number one is it fragments the audience so it changes the way and the time that people receive news and interact with news. News organizations are no longer the gatekeepers of information and they are no longer able to control the story cycle. Either having to or wanting to interact with an audience is the biggest change that technology brought to the news game" (M. Briggs, personal communication, November 5, 2010). Robert Hood, Director of Multimedia at MSNBC, speculated on the old model versus the new one being formed online.

Do you go to an audience or do you build something and expect that audience to come to you? That's the old Nightly [News] model—we will make a broadcast and people will come. Well what if they don't show up? If you can go to *them* with your individual stories and push them through social media? Do you think NBC News will realize they are a media company that needs to distribute on all platforms—I didn't think it would happen in a decade and suddenly we're there practically (R. Hood, personal communication, September 22, 2010).

Not only do news organizations themselves deal with identity problems when it comes to their presence on the Web, most legacy media organizations also continue to fight

audience perceptions of their roles. Kieliszewski, Photojournalist and Multimedia Producer at *The Detroit Free Press*, commented:

I don't follow the metrics – but like all newspaper websites we wonder why we don't see more return and I think it's a function of the site itself – people say, "I didn't know you [*The Detroit Free Press*] did video." We are trying to raise awareness and have a public showing because it is about educating the audience that this is what we do. Newspapers and video in our world feels really like it's happening all over, but for the average consumer I don't think they see it as much – you have to put it out there and be in people's faces (K. Kieliszewski, personal communication, September 9, 2010).

As Kieliszewski notes, the battle for an audience for multimedia presentations on legacy news websites has much to do with perceptions. Social media websites like Facebook and Twitter are the water coolers of our time. No longer do people talk about what they saw on the most popular sitcom on a network. They talk about the latest video to go viral on YouTube. To stay relevant for today's audiences legacy news organizations must change their regular procedures in order to have a presence in these new social media arenas because that is what will drive audience.

Legacy profits and balancing budgets.

The once lucrative broadcast and print industries are feeling the economic pressures of competing with online-only news organizations and social media outlets, but they do so with old financial models continuing to dictate the money-making structure (Blodget, 2009; Marash, 2011). The figurative "license to make money" enjoyed by most in the broadcasting business is threatened by what Jeff Zucker (2008) of NBC Universal calls the problem with "analog dollars to digital dimes." It is still a fact that all types of legacy news media continue to produce more advertising revenue from their traditional

print and broadcast products than from their digital products, and this disparity means that fewer resources are devoted to online journalism. While profit margins remain quite high in comparison to other businesses, revenues have dropped for all legacy media organizations and many have restructured newsrooms and cut newswriters to make up for the loss of financial resources (Blodget, 2009; Malone, 2009; Rosenthal, 2012). Online news consumption continues to climb, but because the digital revenue stream is so small in comparison to traditional legacy media advertising, newsrooms continue to cut budgets and staffs in order to try to maintain profit margins (Pew, 2011). The shrinking revenue stream creates an enormous challenge for legacy news managers. KGW Media Group News Director Gramer put it this way, "...if you strangle the goose the gosling will die. So the Web is only going to be as strong moving forward as we are on TV. Now the trick is to integrate these resources so both get strong, so both stay strong going forward" (R. Gramer, personal communication, June 5, 2010). KGW Media Group and its parent company, A.H. Belo Corporation, continue to see profits, but many legacy news organizations have radically changed their commitment to producing multimedia presentations in order to pull personnel back into the traditional legacy media production structure. This was the case with Mulvany, Photojournalist and Multimedia Producer at *The Spokesman Review*.

The reality is that the print product still makes the money. The reaction at that time [2008] was that we needed to save the print product and put the resources back into the print product. They pulled back all the ideas of having a mojo [mobile journalist] and doing breaking news – all gone. And really without much thought – just ‘we’re not going to do that anymore.’ So we’re still here and but they understand that they can’t keep doing what they used to do – it’s a whole new business model taking shape. And now I have three assignments a day for the paper as a still photographer so it’s really hard to commit to doing video (C. Mulvany, personal communication, September 12, 2010).

The confluence of a global economic downturn and the dollars-to-dimes disparity in advertising is causing a dangerous inertia in online journalism, according to Tom Kennedy, former Managing Editor/Multimedia, WashingtonPost.com:

The economics of publishing have changed so greatly whether in TV or print that the decline in absolute revenues and profitability particularly related to advertising has just impaired the ability to consider doing anything new and therefore not taking full advantage of the possibility of allocating information resources radically differently. It's a layer of inertia that I think is there—or lack of curiosity or lack of effort that is impacting most media organizations. Personally I'm more sympathetic to that as a rationale for why things aren't moving forward as fast as they possibly could be, but I'm distressed by the level of inactivity and action that is occurring because we're forfeiting opportunities to develop new ways of viewing journalism's work as a service to the community—that's really what I get very concerned about personally (T. Kennedy, personal communication, November 9, 2010).

There is a general fear of change and a definite fear of loss of revenue. John Forucci of New Hampshire Public Radio put it bluntly, “The scariest part I think for traditional media is that a large part of their current revenue—the lion's share—is still coming from the legacy medium, so what they look at is literally cannibalizing their current model to build a bridge to the future” (J. Forucci, personal communication, September 27, 2010). KGW Media Group General Manager D.J. Wilson sees the writing on the wall as she watches newspapers fold. “The tipping point has to happen in terms of where we can really make a business of the Internet in a way that actually supplements the loss of dollars on the TV side. This whole notion of analog dollars to digital pennies, it's like what happened in the newspaper business” (D. Wilson, personal communication, June 5, 2010). Numerous interviewees agreed that in the long run however, the tipping point will be the willingness to risk some of those analog dollars in order to move the news

organization completely into the digital realm. Focusing the moneymaking opportunities on the 24/7 website versus the five, six and eleven o'clock news shows may eventually bring in enough of those digital pennies to balance the scales. However, the break from inertia will undoubtedly cause some nervousness among stockholders.

News traditions and organizational history

Whether working in converged organization such as the Media General property in Tampa, Florida, or as a solo still photographer trying to add some video to a small paper's website, there are institutionalized cultural hurdles in producing multimedia presentations for legacy media organizations (RQ2). These include working within legacy-defined job descriptions, and with legacy-defined expectations. Multimedia processes and presentations are heavily influenced by the newsroom cultures within which they are produced. One dominant theme that emerged was the influence of a "Web-history" within the news organization. Even prior to the bandwidth penetration that allowed for consistent video quality, media companies were thinking ahead, but too many ignored their websites and therefore set a precedent for entire newsrooms to ignore any contribution to those websites. Brady Carlson, Web Producer at New Hampshire Public Radio, admitted that even in 2004 "NHPR.org was pretty much just an audio archive of what we did on the air. There wasn't much additional material, we'd post a link or two every so often, but it wasn't anything really more than that" (B. Carlson, personal communication, August 5, 2010). Although Carlson speaks of the past here, the legacy effect continues at New Hampshire Public Radio. It is still unusual for the staff to post images and video on a daily basis, although many of their freelance contributors provide

them. Shannon Mullen, a freelance radio reporter, who produces stories for New Hampshire Public Radio as well as for National Public Radio, says,

As a reporter I am definitely thinking of things in the field differently, like thinking this is something that would be better portrayed as a photograph to go along with my story. So I have to make sure I take this picture and I've got my trusty little digital camera that I take with me everywhere now – *everywhere*. And people are still surprised when I pull out a camera, they're like, 'I didn't think I was going to be photographed, because you're radio,' and I say, 'oh no, we're not just radio anymore' (S. Mullen, personal communication, September 10, 2010).

MSNBC was founded as an online entity and thus was seemingly able to avoid carrying some historical baggage, but Internet speeds and hiring decisions dictated their early history. Hood, Director of Multimedia at MSNBC, outlines the transitions:

There was this idea [at MSNBC] of multimedia and the way that plays out is often in the pools of people from which you hire – right? Because of NBC's involvement there was a TV culture – people who were hired from TV, but because of MSNews – which was kind of a newspaper online – it's a page with a picture and a headline and an abstract and a story, a text story. Those people were here in place and had developed a culture and an established trust. Then they you sort of stapled the NBC thing on top of it. At the time – in 1996 – an amazing modem was a 28, maybe 56kb per second [a very slow download speed] – so back then multimedia was really still pictures, text, some maps, some audio—really lo res audio—that were links next to pictures. No video. But it's funny, we knew we needed to deal with video and wrap our heads around it, but what we were primarily using video for at that time was really another still picture source (R. Hood, personal communication, September 22, 2010).

Another theme in interviews was a “print versus broadcast” mentality among newswriters. Although most multimedia presentations are produced for the same distribution method—a website—the professional identities of *newspaper* reporter or photographer and *television* reporter or photographer continue. Many who were interviewed mentioned old print versus broadcast hierarchies. Those who shoot still images for newspapers regard their work as more “serious” than television

photographers, and, even as they hold video cameras, they are quick to state they are “not doing TV” (Fadely, 2006).

When asked whether companies’ institutional and organizational histories contribute to attitudes toward the production of multimedia presentations (RQ2), *The Spokesman Review* Photojournalist and Multimedia Producer Mulvany told a story that outlines the attitude issues quite well. He remembers when his 20 years of experience as a still photographer took a radical turn:

He [the managing editor] literally opened his desk drawer and handed me the company Visa card and said, “Spend about four grand.” I went as fast as I could to the camera store and bought a Sony VX2100 [video camera] with a wireless mic and a shotgun mic and a tripod and I went for it. I remember the next day there was a call on a trailer fire and I went to this thing and started to shoot some b-roll [cover video] and the police chief showed up and all the TV stations were there and setting up their tripods. I pulled out mine and set it right next to them and they’re all looking at me going, “what the hell are you doing?” I said, “I’m the future baby!” I asked a couple of questions and went back and tried to be as much like TV as I could. But I realized [later] that I don’t want to emulate TV and I started to think about other ways to tell a story (C. Mulvany, personal communication, September 4, 2010).

The changes to professional identities even within their legacy newsrooms—word people versus image people—impact the production of multimedia presentations. Even in the cutting-edge environment of MSNBC’s Redmond, Washington, office, Hood acknowledges:

...people want to say ‘my medium is better than yours’ and it’s sort of a legacy problem and we fight that at times, but I would hope that we’re all a little humble and willing to know that this person who cut video for ten years at a TV station probably knows what they’re talking about and I should listen. On flip side, if we’re incorporating stills into that video that person usually knows when to listen to me [about the quality of the image] (R. Hood, personal communication, September 22, 2010).

Jenkins of National Public Radio, says that in the traditional radio environment they use the term “Web literacy” to coax their audio-centric reporters into thinking “...hmmm, there might be some picture opportunities here so maybe I should contact someone in multimedia and see how they want to approach it” (K. Jenkins, personal communication, October 25, 2010). Briggs, author of two books on producing for websites, and who now directs digital news for a television station, sums up the overall problem:

...it’s going to take awhile, but we’re going to try to reorganize work flows and the structure of things, but the biggest piece of that is going to be reformatting the culture. And my favorite saying is, ‘culture eats strategy for lunch everyday’ (M. Briggs, personal communication, November 5, 2010).

At *The Roanoke Times*, Martin does see the mindset changing:

Instead of saying ‘this is a print project or this is a multimedia project’ – we said, ‘we want to tell this story.’ It was pretty holistic – [the Under 21 series] was one of those cases where all the right people were in the room from across the board. We said – ‘how do we tell this story best as a whole, as opposed to how do we tell it in print and oh, yeah we have this website thing.’ So, it was not driven by one or the other – it was ‘here is what we have.’ We’ve done that with a lot of other projects and each time we learn how to do it better” (M. Martin, personal communication, October 11, 2010).

Interviewees agreed that the turning point in attitudes around professional identities and competition in general will likely hinge on the newest crop of journalism students. These students will come out of universities with specific online training that includes telling their stories using a wide range of multimedia presentation techniques. Martin hopes that her title of “Online Editor” will fade away and that the legacy attitudes will finally take a back seat to figuring out the best way to tell the story.

Entrepreneurialism and Risk-taking

Speaking of his employer *The New York Times*, Interactive Producer Aron Pilhofer made a rather unexpected statement about the “Gray Lady.”

You’d be surprised how entrepreneurial this place is. It’s kind of a tradition here—it’s the kind of place that is willing as a near-strategy, to throw enough people at a problem and figure they’re all smart enough that somebody will figure it out. So they’re always willing to consider spaghetti against the wall solutions to problems. That’s how my team [interactive] came to be, but that’s the big difference, we have resources. We will experiment within certain parameters (A. Pilhofer, personal communication, June 28, 2010).

In answering the question of whether a news organization’s entrepreneurial spirit and risk-taking attitude make a difference in multimedia presentations, Pilhofer’s thoughts are telling. Resources make a difference. Not surprisingly, it is the larger organizations that have more human and financial resources that have allowed their newswriters to be risk-takers. National Public Radio producer Jenkins also points out that there are advantages to a lack of identity in some areas.

There were no visual legacies to have to deal with. We were able to create our own visual identity and I think that that is one of the goals for how we move into a more mobile environment as well. I think the good thing about this place aside from willingness to embrace the Web is they’ve done a really good job of hiring smart folks to run the operation—there is an amazing vision for what we can do with the Web and with all of our digital platforms (K. Jenkins, personal communication, October 25, 2010).

It should also be noted however, that some of the smallest news organizations also display this mindset, as suggested by Katie Gibas of YNN Cable Television in Syracuse. “In terms of getting stuff onto the Web or being creative and suggesting things, pretty much as long as I’m physically able to do it. I can suggest almost anything” (K. Gibas, personal communication, November 3, 2011). Judging by the dominance of video presentations at YNN Cable Television however, Gibas is affected by the necessity of

creating stories for the television station first and foremost. It is those companies in the middle that seem to struggle most with employee motivation and resources. One segment of the newsroom might appear to be quite entrepreneurial while another is stuck in former practices. At *The Detroit Free Press*, “The reporters don’t necessarily think in terms of multimedia—it’s all generated by the photo department. Their editors don’t think of multimedia, but our picture editors and directors see a story and think ‘hey this will make a nice video project or feature’” (E. Seals, personal communication, September 7, 2010).

The entrepreneurial attitudes of management, as well as the resources they can muster, are key points as these organizations plan for effective multimedia presentations on their websites and mobile applications. Again, the findings indicate that things are better at the extremes. *The New York Times* Director of Multimedia stresses that the publishers and owners of the larger organizations trust their staffs and support them financially. In some cases managers have gone through multimedia training, resulting in better understanding of the process. In smaller organizations like *The Roanoke Times* there is a hunger to run with ideas. “It’s really cool because there is a lot of experimentation here too since everyone has hit a nice stride. One you hit that stride you can start experimenting and doing really cool stories (M. Martin, personal communication, October 11, 2010). In the middle however, there appears to be a slowing of experimentation. Rollins of KGW Media Group says, “We’re the leading news website in town, but we’re very button-down. If you look at the stories on our website, there is no writer’s voice—it’s just information. It’s very straightforward, not fancy pants. I think that is our brand identity” (M. Rollins, personal communication, June 18, 2010). From

the management side of KGW Media Group it's evident that they would like to be moving forward with more multimedia, but have been constrained by financial concerns.

The economic piece is we've got to feed the mother ship...we have to be engaged in everything we pride ourselves in as far as journalistic excellence—all that has to be very robust on the website also, but right now at times the best we can do is repurpose [video from the air] and say, if you're not watching us on the legacy screen perhaps your medium of choice is something else (D. Wilson, personal communication, June 18, 2010).

Those producing daily multimedia presentations are more often the newswriters taking the risks. They have the tools and usually they have the motivation to try something new. As with the introduction of any new technology, there are those who embrace it and those who are tentative, but throughout these interviews the greatest hope for continued growth in multimedia seems to lie with these producers (Rogers, 1995). One radio reporter commented, "It's all so incredibly rich visually, aurally, and with the written word. You feel like you don't have enough time to take advantage of all the stuff there—there's just an explosion of creativity" (S. Mullen, personal communication, September 10, 2010).

The push and pull of risk versus security was evident throughout the interviews. Even those who are excited about the growth of creativity and the chance to do new types of storytelling with new types of tools are aware that they are still limited by the economic realities of their legacy medium's history. *The New York Times* has both the financial and the human resources to bring multimedia production practices into every phase of their online offerings. Those within express a feeling of being part of a sort of research and development arm where great things are expected, but there is also room to fail. Other news

organizations seem to be less inclined to stick with this online trial and error and at this point can simply not afford to emulate the nytimes.com.

My analysis of these interviews helped to answer the first two broad research questions by looking for ways that the interviewees saw traditional legacy media practices influencing the formats and characteristics of multimedia presentations. I also looked for opinions on their organizations' histories with technological change and the perceived impact on producing multimedia. Their answers revealed the complexity of the transition to digital news production and distribution. Newsroom procedures and cultures can encourage or discourage innovation. Some newswriters embrace new technology and storytelling techniques and some are fearful.

Socialization in journalism school and in the newsroom.

In the interview process all subjects were asked about their own educational and occupational backgrounds. This provided some answers for the third research question (RQ3), which asks whether the journalistic upbringing of newswriters and managers has an influence on multimedia presentations on legacy news websites. In this study the findings show that three-quarters of those interviewed were educated in traditional journalism programs. In exactly half the cases, if producers and managers started their careers in a particular medium they stayed in that medium (Table 5.5). They are steeped in the production traditions and structures of newspaper, radio or television newsrooms. However, the half who switched from one legacy medium to another have often adapted to the ways of their current newsroom. This study does not show any broad tie between a newswriter's educational background and the type of multimedia formats and characteristics used in their multimedia presentations. A few commented specifically

about the use of still images in certain presentations and how much they valued their training in print, but most spoke more about they environment in which they worked to produce multimedia presentations.

TABLE ON FOLLOWING PAGE

Table 5.5 Education and work backgrounds of interview subjects.

Interviewee	Education	Work History	Current Position
Susan Bock	Liberal Arts	Web Design, Technology	YNN Cable Television
Mark Briggs	Journalism (Editorial)	Newspapers, Multimedia	KING Broadcasting
Brady Carlson	Journalism (Broadcasting)	Radio, Web Design	New Hampshire Public Radio
Andrew Devigal	Information Systems	Newspapers	<i>The New York Times</i>
Nancy Donaldson	Journalism (Photojournalism)	Newspapers, Multimedia	<i>The New York Times</i>
John Forcucci	Journalism (Editorial)	Newspapers	New Hampshire Public Radio
Katie Gibas	Journalism (Broadcasting)	Television	YNN Cable Television
Rod Gramer	Journalism (Editorial)	Newspapers, Television	Bay News 9, Tampa KGW Media Group (until 6/ 2011)
Robert Hood	Journalism (Photojournalism)	Newspapers	MSNBC
Keith Jenkins	Liberal Arts	Newspapers, Technology	National Public Radio
Lacey Johnson	Journalism (Broadcasting)	Television	YNN Cable Television
Tom Kennedy	Journalism (Photojournalism)	Newspapers, Technology	Professor, former Managing Editor/Multimedia, WashingtonPost.com
Kathy Kieliszewski	Journalism (Photojournalism)	Newspapers	<i>The Detroit Free Press</i>
Connie Kim	Journalism (Broadcasting)	Radio	KCBS Radio
Megan Martin	Journalism (Editorial)	Newspapers, Technology	<i>The Roanoke Times</i>
Frank Mungeam	Liberal Arts	Television	KGW Media Group
Shannon Mullen	Journalism (Broadcasting)	Newspapers	New Hampshire Public Radio (freelance)
Colin Mulvany	Journalism (Photojournalism)	Newspapers	<i>The Spokesman Review</i>
Aron Pilhofer	Journalism (Editorial)	Newspapers, Technology	<i>The New York Times</i>
Tracy Record	Liberal Arts	Television	West Seattle Blog
Mike Rollins	Journalism (Editorial)	Newspapers	KGW Media Group
Eric Seals	Journalism (Photojournalism)	Newspapers	<i>The Detroit Free Press</i>
D.J. Wilson	Journalism (Broadcasting)	Television	KGW Media Group
Stokes Young	Liberal Arts	Television, Technology	MSNBC

All of this is not to say that socialization in newsroom norms does not start early. Journalism and mass communication textbooks are often designed to socialize students to an occupation and journalism professors are generally reading industry-specific publications and journals. From an early point in their careers young communication students are directed into particular tracks of news-editorial, broadcasting, public relations or advertising where they acquire the special knowledge in that field (Shoemaker & Reese, 1996). Many subjects interviewed for this research had studied journalism in some form. Since they are working in the “new media” areas of their newsrooms, they perceive themselves as being more enlightened than their writer or photographer colleagues, but they acknowledge the journalistic skills they learned early on shaped their thinking about the production and distribution of multimedia presentations on websites. One radio reporter-turned-web-producer said her broadcasting background “helps me to understand news content to place stories and pages strategically on the website so it makes sense for the user” (C. Kim, personal communication, July 25, 2010). Another manager who is now in radio commented, “Weekly papers made me a jack of all trades. I shot photos, I drew cartoons, I wrote editorials and edited. I helped to produce the papers on production day to get things typeset. I’ve really been through all phases of producing newspapers” (J. Forcucci, personal communication, September 27, 2010). Even in their current positions working to create and promote the online product for their news organizations, producers and managers tout their journalism backgrounds as the key to their expertise. The undercurrent of experience and competence in their original legacy news medium may to keep them from looking for ways to do things differently.

Qualitative findings summary

In their entirety, the interviews outline the struggles as legacy media try to break free from their print and broadcast roots in order to follow the audience to various screens and devices. Do traditional legacy media practices contribute to specific production values in the multimedia presentations on their websites? As brought out in these interviews, newswriters clearly think they do. Just as the content analysis revealed patterns in these multimedia presentations, the producers see the stamp of their legacy medium on the organizations' acceptance of new practices. Depending on their position within a company, they have a variety of opinions as to their ability to move forward. Those working directly on production of multimedia presentations definitely feel inspired creatively, but they also voice some frustration in always fighting against the needs of the legacy media product. Those in management sound realistic about the economic challenges of trying to move into the digital sphere while still maintaining profits. In part this seems to produce an odd set of blinders for these managers—seeing the road ahead, but not how their legacy practices weigh down production for their websites. All managers agree that their legacy roots anchor them in past practices, but most say the greatest constraint is resource allocation.

The third research question (RQ3) sought to evaluate newswriters' occupational and educational backgrounds and the research found that about half of the interviewees had moved between legacy media types. However, their socialization in their current newsroom certainly seems to contribute to the nature of the multimedia presentations on their organizations' websites. In general the preceding pages show that newswriters in

news organizations of all sizes make attempts to do new and creative work, but are often thwarted by old structures and established cultural norms.

In the interviews I asked newswriters to talk about their own perceptions of the legacy effect and how the practices of the legacy medium surfaced in multimedia presentations. I also raised questions as to how organizations adopted new technologies and how newswriters were trained on that equipment. I questioned them as to a sense of entrepreneurialism and risk taking encouraged by those in leadership. Given the economic climate, it was also necessary to touch on the perceived impact of the recession. Finally, I asked each subject about his or her education and professional background. As with any human endeavor, no one interviewed approached any of these questions in isolation. Organizational and individual decisions are woven through each and they combine to create a legacy effect unique to each organization. Each newsroom provides a certain environment for change and each of these interview topics move dynamically through that environment.

At *The Detroit Free Press* the staff felt great freedom to try out different types of multimedia presentations. They described the group of photojournalists as quite entrepreneurial, but in the same sentence mentioned the lack of funds to send people to multimedia workshops. The staff works well with the editors—suggesting stories for the website, thinking of ways to tell a story with video—but often a photojournalist cannot be freed from a traditional assignment to take time to shoot and edit video. The staff is simply too small and the economic climate has frozen hiring. At *The New York Times* the managing editors are pulling the multimedia teams into stories, but the culture dictates

that the words come first. Interactives and audio slideshows are often considered enhancements to larger stories, not stand-alone presentations.

At National Public Radio the interconnectedness of these themes appeared in training. Long an audio-centric organization, NPR took a “train everyone” approach to adding images and video to the website. The choice to bring in outside consultants proved a disaster and eventually management shifted gears to train a more limited pool of producers. They also hired photojournalists rather than stretch the radio reporters too thin. In this case the adoption of new technologies was met with some resistance and management back pedaled to accommodate the culture. Audio continues to be the main news product from NPR and they enhance some stories with still images or video.

In television newsrooms there tended to be good training designs, but these often bumped up against frustrations in integrating new technologies. Getting broadcast equipment to mesh with web technology has proven to be the biggest hurdle for these newsrooms. Those interviewed also mentioned the perception that shooting video on a phone was somehow beneath them. The cultural battle even around the size of the camera was quite apparent. Managers could put excellent training in place, but if the television newsroom staff saw the equipment as a step down, there was resistance. Not surprisingly television newsrooms were described as the least entrepreneurial of the three legacy media. Perhaps this is due to the constant pressure to feed the broadcast product, but there seems to be little encouragement for the regular news staff to create anything new for a website. Investigative units show a bit more promise by providing television viewers with “more information on our website,” but even that is pale by comparison to some of the interactives produced by newspapers.

CHAPTER SIX

CONCLUSION

In this dissertation I set out to understand how the multimedia presentations on legacy news media websites reflect the standards and practices of their medium-of-origin. This was accomplished by using a two-pronged research approach incorporating a content analysis to test for quantifiable differences between the formats and characteristics in multimedia presentations, followed by in-depth interviews with multimedia producers, website managers, and digital journalism experts. The interviews served to tell the stories of legacy media newswriters during a time of rapid change in the media industry. The research focused on 11 legacy news media websites that represented different media types (print, radio, television) and market sizes (micro, small, medium, large).

Just as Boczkowski (2004) discovered in his study of multimedia on three newspaper websites, my research suggests that institutional histories and structures continue to shape multimedia presentations on legacy news websites. This is the so-called legacy effect and its positive and negative impacts are evident throughout this research. For the most part, television multimedia presentations rely on repurposed video. Radio websites depend on audio, and newspaper websites continue to make heavy use of still images and text within their multimedia presentations. However, there is also some confirmation that news organizations are moving toward convergence. This is most clear in the multimedia presentations of newspaper websites where there is exploration in video, audio and interactives—storytelling methods unavailable in the print product. As with Boczkowski's findings, the interviews with newswriters revealed a passion for journalism and for this new form of expression. However, this study also finds

newswriters still fighting the constraints of their legacy news media roots even as increased penetration of broadband internet connections allows all legacy media organizations to place more multimedia presentations on their websites.

As I analyzed the findings in all phases of this research I found it easiest to explain the legacy effect by imagining each legacy media type on something like a racetrack. The starting point for each can be imagined as place with all of the usual tools—newspapers have text and still images, radio has audio, and television has video. In the legacy world, none of these legacy media types has much access to the tools of the others except for television's use of audio and even this is used only with accompanying video. Imagine moving down the racetrack as the degree to which each legacy medium is expanding beyond the potential of the old tools. This gives a good visual sense of how each is responding to the challenge of multimedia production. Given the findings of the content analysis it is television news organizations that show the least inclination to go beyond the usual boundaries. Newspapers have certainly moved out from the starting line and into true convergence with strong emphasis on video and interactives within multimedia products. In many ways radio news organizations have added the most given the traditional roots in audio alone. Now radio websites include photos and some video—a strong move toward giving the audience more multimedia choice. There is certainly progress among all of the legacy media types, but the necessary commitment to the moneymaking legacy product is a strong headwind.

This chapter will briefly revisit the methodology used in the content analysis and examine its value as a research tool in future studies. It will then review the quantitative and qualitative findings and offer possible rationales for legacy news media's reluctance

to stray from the roots of legacy traditions. Next it will offer findings that were not addressed in the hypotheses or research questions, but that contribute to a more complete story of what is happening to legacy news media as they straddle the past and the future of journalism. I will conclude by discussing the practical implications of my research for legacy news media organizations as they move forward.

METHODOLOGY

One of the primary goals of this research was to establish and test a method comparing multimedia presentations across various legacy news media types—newspapers, radio, and television. It expanded on previous conventions of textual content analysis and web analysis by offering procedures to collect and analyze multimedia presentations on websites (Burnett & Marshall, 2003; Krippendorff, 2004; Neuendorf, 2002). By analyzing multimedia presentations on legacy news media websites we can identify patterns in the ways legacy news organizations are using traditional mass communication tools—text, still images, recorded sound, moving images, and graphics—to create these presentations. This new method improves on multimedia scholarship in the following ways:

- It offers a comprehensive way to identify multimedia presentations. Definitions are provided for five common formats in multimedia presentations—video, audio+adjacent images, audio slideshows, interactives, and multimedia packages. Also defined are content modes—text, still images, recorded sound, moving images, graphics—the building blocks for multimedia presentation formats. I have named characteristics that are common to legacy news media production, such as the use of narration tracks, the use of still images, and the use of text.

These characteristics can be compared and analyzed in multimedia presentations.

These definitions provide a strong standard for analyzing multimedia presentations from any source, including mobile devices.

- This research suggests there should be a minimum number of content modes used in a multimedia presentation. Traditional legacy media distribution usually only provides one or two content modes, for instance stills and text in newspapers, or audio on radio. I suggest that three content modes be present in a multimedia presentation on the Web. This sets the presentation apart from its legacy counterpart since a news consumer is able to experience the story in different ways. Setting this minimum further standardizes of the definition of a multimedia presentation.
- In providing explicit definitions for multimedia modes, formats, and characteristics, I have added some certainty for future research on multimedia of all types. The terminology often used in past research has been inconsistent at best and confusing at its worst.
- This research expands on previous scholarship by focusing on the elements that make up a multimedia presentation. In the past studies have looked at the presence or absence of some types of multimedia, but none have broken multimedia presentations into specific formats and their characteristics
- My method for selection of legacy news media websites sought to obtain the best-of-the-best in the production of multimedia presentations. Starting with news organizations that were recognized for excellence in this area sets a high standard

for what constitutes multimedia. In the future this standard can be applied in a different sampling strategy.

SUMMARY OF FINDINGS

Key findings in the content analysis

The hypotheses that guided the content analysis proposed that multimedia presentations on legacy news media websites would contain similar formats and characteristics to those in the originating medium.

- Television and radio news websites used multimedia presentation formats that match legacy practices (video or audio+adjacent image) more than 90% of the time, which is consistent with the larger hypothesis.
- Newspapers, as expected, used a comparatively high number of still images within video and interactive multimedia presentations. Again, this is consistent with predictions in the hypotheses.
- Television news organizations regularly repurposed video from on-air products to populate websites. While not formally proposed in a hypothesis, this result is an expected legacy effect.
- The picture was somewhat more complicated when it came to the multimedia presentations on newspapers' websites. These were dominated by video (60%), but they also had the greatest variety of multimedia presentation formats represented.
- Contrary to expectations, longer paragraphs of text accompanying multimedia presentations were more common to television websites than to newspaper or radio websites.

- The larger legacy news organizations were able to produce a greater number of labor-intensive multimedia presentation formats, such as interactives, than the smaller legacy media counterparts.
- The decision to drop a net-born website from the final study may have resulted in a missed opportunity to compare the traditional media's websites to those that grew up from Web-only roots. Obtaining multimedia presentation data from net-born sites such as Slate, The Huffington Post, or Politico would have added an additional dimension to the research, since it is difficult to say whether some practices I attributed to the legacy effect might have been common even in purely Web-driven journalism.

Key findings in the interviews

The research questions guiding these interviews posed the broad question: How do legacy media practices influence multimedia processes and presentations?

- Whether printed newspapers or over-the-air radio and television, the legacy news media product continues to bring in the most revenue for these media companies. Therefore, all online products, including multimedia presentations, tend to be treated as afterthoughts when it comes to resource allocation.
- Most daily assignments favor the legacy tradition. Therefore multimedia presentation production is either ignored or comes into play late in the story-telling process. For instance, daily news meetings continue to revolve around legacy deadlines and provisions for telling a story using multimedia are too often afterthoughts.

- Traditional professional roles remain quite strong. There are “word people” and “visual people.” There remains a legacy effect among newswriters in the fact that news writers and television reporters still think that others will provide images, and photojournalists still think someone will write copy for their images.
- The educational and occupational backgrounds of newswriters socialize them to the processes of a particular legacy news medium. Even when some moved from print to television, for instance, they quickly become socialized to the new newsroom culture. This likely results in multimedia presentations resembling the legacy product of the newswriter’s current newsroom, rather than helping with any cross-pollination among legacy media types.

The journalists and managers at news organizations I studied know they need to embrace news production and distribution on the Web, but they are trapped by legacy cultures. As Tom Kennedy the former Managing Editor/Multimedia at WashingtonPost.com pointed out, there is an inertia that is proving difficult to overcome. Keeping the legacy news product on life-support while still nurturing the new Web product is a challenge in lean times. Timing is key and one wonders if risks had been taken in the boom years of the late 1990s, maybe some now-defunct newspapers would have weathered the storm.

ADDITIONAL FINDINGS

Both the content analysis and interviews led to unexpected findings. First, a crossover of storytelling patterns is creating some commonalities as traditional print entities add video and broadcasters add more text to multimedia presentations. In other words, the typical television news story follows a formula of an anchor lead-in, narration

over video, a few sound bites, more video, and a reporter stand-up. Newspaper video production is beginning to mimic these television practices. In the same way, broadcasters accompany multimedia presentations with captions, headlines and longer paragraphs that were traditional in print. However, when it comes to the length of these multimedia presentations, newspapers are breaking some new ground. Second, several interview subjects spoke about the technological constraints that hinder a smooth transition in placing multimedia presentations on websites. Lastly, interviewees mentioned a steep upward curve in the penetration of smart phones, tablets and mobile applications. This trend is leading newsrooms to follow consumers down yet another technological path and it poses new challenges for the producers of multimedia presentations.

Common storytelling patterns

The increasing use of video on newspaper websites is a strong indication that convergence is starting to take place in some legacy news organizations. For good or ill, legacy news media are copying each other's established techniques. As noted above, newspaper video presentations often used narration over video, sound-bites and natural sound, as is common in television news. All video presentations were examined for use of narration, reporters, anchors, studio settings and special video effects. The most significant finding related to common storytelling patterns is use of reporters and anchors (See Table 4.6 and Table 4.7, pages 95-96, Chapter 4). Newspaper video presentations *do* use these standard television practices of highlighting an anchor or reporter about a quarter of the time. Interestingly, in the time since this study was completed *The New*

York Times has added “Timescast,” a daily round up of news that is posted in the late afternoon. Not only does this feature borrow the headline format of a television or radio broadcast, it is posted at the most traditional time for newscasts. Even the “cast” moniker is borrowed from legacy broadcasters. However, on most of the newspaper websites analyzed for this research—including *The New York Times*— it was common to see multimedia presentations that emphasized strong visual elements and a character-driven narrative with little reporter involvement. In a signal of non-conformity, the newspapers highlighted in this study seem to be making an effort to do new things on websites. The data show they use a variety of formats and within those formats they attempt to break the legacy media patterns. Meanwhile, television video presentations continue to highlight reporters who build a story around a set of sound bites.

Multimedia presentation length

The length of multimedia presentations was compared across legacy media types. Online distribution allows for relatively unlimited space and time for multimedia presentations, and while newspaper video presentations mimic television news production in some cases, the average length of story shows they take advantage of the ability to post longer presentations (Table 6.1). The outlier in story length among the television news organizations is MSNBC, but this might be attributed its long roots in the digital world through the early partnership with Microsoft. MSNBC published material on the Web from the day it was launched, so producers might never have felt the time and space constraints common to television, radio and newspapers.

The interviews revealed that managers believe lengthier multimedia presentations do not hold audience attention on the Web, but until recently Web analysis methods have

been poor at tracking the minutes spent with any type of multimedia presentation. Older methods for judging audiences concentrated on numbers of clicks per user visit, rather than engagement in any particular content (ComScore, 2012). In this research it was clear that multimedia presentations over 10 minutes are not common, but there is some indication that newspapers favor presentations that run about a third longer than those on television websites. The two larger newspapers generate the longer multimedia presentations, which indicates some reaching toward the legacy tradition of longer print stories (Table 6.2). Except for news magazine shows on network television and the occasional investigative report on local television news, most broadcasters have abandoned any longer video presentations. They have opportunity to produce these types of stories for the Web, but there is no indication that they are moving in that direction.

Table 6.1
Average length of video presentations by legacy news media type.

Legacy Media Type	Average Length of Video Presentation (min:sec)	
Newspaper	3:01	n=121
Television	2:20	n=191

Table 6.2
Average length of video presentations by legacy news organization.

News Organization	Average Length of Video Presentation (min:sec)	
<i>New York Times</i>	3:40	n=30
<i>Detroit Free Press</i>	4:20	n=49
<i>Spokesman Review</i>	2:20	n=17
<i>Roanoke Times</i>	1:45	n=25
CNN	2:55	n=50
MSNBC	3:40	n=40
KGW Media Group	1:30	n=50
YNN Cable Television	1:20	n=50

Technological constraints

Newswriters producing multimedia presentations continue to be frustrated by their newsrooms' lack of acceptance of new technologies that ease production and the ability to post to the Web. The subject of technological hurdles came up so frequently in early interviews that specific questions along this line were added to the scripts for later interviews. The most pertinent question was, "Do you feel held back by technology within your news organization?" Broadcasters provided the most impassioned answers to this question. One multimedia producer went so far as to say he considered the legacy media an albatross—holding the newsroom back from what it could really do with its Web presence. Television has been perceived as the "cutting edge" technologically since its inception, but when it comes to embracing innovation on its websites, insiders say it lags behind. This is largely due to the difficulty in transferring video from professional broadcast cameras directly to a website, and legacy media managers say broadcast equipment manufacturers are not rushing to make it easier. Ironically the print organizations appear more nimble with multimedia presentations simply because they do not have the huge capital investment in high-end cameras, editing equipment and live transmission trucks. Frank Mungeam, Director of Digital Media for KGW Media Group, put it this way:

If we were to build this from scratch—it's 2010 and we're a media company, not a TV station with a website—how do we equip our people in the field? What we would do is equip them with something that generated digital content at point of conception—in a format that could be distributed in parallel across platforms. [The TV newsroom computer system] is completely non-integrated—we can't publish to the Web. The reporters have to go through a whole different training to publish to the Web and have to launch a different tool. We have photographers shooting on cameras that do not capture content in a digital form. The amount of [file] conversion we do—it's unbelievable the lack of integration.

It's understandable, not bad or wrong, but we're still beginning with tools that are designed for a different world. In a corporate environment you don't just get up one day and write a massive check and then put in people's hands a whole new set of stuff. The larger the company, the harder it is. Three guys in the garage doing this—they can have [a conversation about doing online journalism] and that afternoon they're at Best Buy buying something. The technology is absolutely an anchor for us relative to our nimble silo'ed digital peers—those people who do *just* digital compared to the legacy players trying to have a competitive level of velocity in the digital space (F. Mungeam, August 30, 2010).

The limitations of television newsroom technologies (e.g. non-linear editing, digital ingest, digital play-out) and these specific file formats continue to vex station personnel.

The simple solution is an integrated method by which a video editor could publish directly to the legacy news website through editing software. When presented with this option, however, legacy news managers turned pale. The gatekeepers in legacy newsrooms are loath to give up power.

Mobile devices

According to Pew Research, over 70% of smart phone users in the 18- to -29-year-old age group use their devices to watch video (A. Smith, 2011). Given this high percentage in a key demographic, it is no wonder that legacy news media companies would like to focus on getting multimedia presentations onto these smart phones. Several interview subjects mentioned their own company's push toward news applications. Those in television, in particular, spoke of their mission to be on “three screens”—the television, the computer and the smart phone. It may be the future, but again, the economics of producing media for the mobile world are challenging for these legacy news media companies. Mungeam, of KGW Media Group, is plain in his assessment.

The digital dollars won't ever be one-to-one for TV dollars, so TV won't die, but the distribution of viewership will continue to migrate across. Mobile will be the amazing thing and everybody consuming content on

portable device as primary thing. We're looking at \$10 TV ads and \$1 web ads—I'm looking at \$1 web ads and 10 *cent* mobile ads – mobile is actually destroying our website business model, which is destroying our TV business model (F. Mungeam, August 30, 2010).

Today mobile news applications of traditional print media organizations are still dominated by headlines and text. On television websites the video continues to be repurposed from regularly scheduled news programs. It is easy to understand Mungeam's frustration since the return on investment in the mobile landscape is yet another step down.

IMPLICATIONS FOR INDUSTRY PRACTICE

Most multimedia producers, and those who manage them within legacy organizations, know they are anchored to current business models for the foreseeable future. All involved also know they are in a precarious position, one in which they must adapt or die.

Legacy business interest

Even as revenues drop for most of these businesses, it is still not financially feasible for legacy media organizations to abandon print products or nightly broadcasts. They are pleased that media consumption is up, but realize they are not yet creating news products for the Web and for mobile devices of the future. D.J. Wilson is the General Manager at KGW Media group.

We don't have enough resources there. I know it. We're hanging in and putting on a good game face. We know long-term that organizationally we're not set up to go the distance; we've got to figure this out. But it's hard to put resources against it when all the money is being—when everything is monetized over here [in the traditional television model]" (D. Wilson, personal communication, June 18, 2010).

Most managers in this study expressed interest in what is happening on their websites, but few take time to look beyond their internal web numbers and those provided by ComSource. They also have a difficult time looking past the spreadsheets that indicate a drop in profits. This research suggests that legacy news media organizations are following old patterns of news production and distribution because they lack resources to create new products for the Web while trying to preserve a strong legacy product. Media companies have tried to maintain the relatively high profit margins enjoyed in the '80s and '90s even as readers and viewers have migrated to online news sources (Ahlers, 2006). Rather than allow these margins to fall too far, owners have often cut newsroom staff or reassigned staff to serve the legacy news product rather than the digital news product.

I hope that this research will move legacy news media managers to continue to fully integrate multimedia presentation production into their daily assignments and workflows. They are currently tethered to old news cycles and news production methods that favor their print and broadcast products, but to survive in the long run they must invest in multimedia, especially in the types of multimedia presentations that involve the consumer, such as interactive formats. Tom Kennedy, former Managing Editor/Multimedia, WashingtonPost.com, sums up the potential and the problems:

Unless and until fundamental journalism values and assumptions are fully examined, the chances are good that any kind of modification [to the online legacy product] that would make things better and different for the audience is going to happen almost by accident rather than by design. That's the heartbeat of the present moment because I think the opportunities may exist in the long term to really fundamentally revisit everything and really come up with a much more satisfying product for the users. But the weight of institutional inertia is so great and so difficult to break free of, that I think it really begs the questions of whether the

opportunity is going to be adequately and fully seized in the next five years (T. Kennedy, personal communication, November 10, 2010).

It remains to be seen if it's possible for market-driven legacy news organizations to break from the inertia and seize the opportunity. Some scholars say that commercial values cannot provide quality journalism and that it is time to return to the equivalent of the print and postal subsidies that aided the growth of newspapers in our country's first 50 years (Nichols & Mcchesney, 2009). Finally, it is impossible to take the findings of this study out of the context of the economic downturn that began in 2008. There is a possibility that given more slack economic times, there might have been more risk-taking in the realm of multimedia presentations and therefore the negative currents of the "legacy effect" would not have been as apparent. One photojournalist interviewed for the study pointed directly to the recession as the reason for a change in his assignments—from producing video for the newspaper's website, to returning to standard still image assignments for the print product. At his news organization the impact of the economy was dramatic, but there is no doubt that budget tightening caused adjustments in every newsroom. Whether it manifested itself in less training, in fewer new hires, or less new equipment purchased, the effect of the downturn was evident.

Audience

Throughout the interviews for this research, subjects referred to their metrics (statistics on website hits and length of time spent on a website) and the fact that multimedia presentations generally did not attract a great number of visitors on any given day. While this matters to those who are trained to watch

ratings, it is a poor way to judge the value of an online presentation. Some legacy news organizations' own metrics show consumers of online news tend to come back to videos and other multimedia presentations and often link out to social networks with recommendations for the story.

Legacy news media organizations want to know about audience, but need to move beyond the number of clicks recorded on websites. Beyond what goes into producing multimedia presentations, legacy news managers certainly have an interest in what makes a multimedia presentation appealing. On a larger scale we should all be concerned with the impact of these presentations—does the audience engage with and remember a story better when it is presented in a multimedia format? In particular, legacy news media managers want to know what appeals to those in the Gen-X and Millennial demographic. Possibly in cooperation with University of Washington's Human-Centered Design and Engineering department, an eye-tracking study could be conducted to judge interest in specific multimedia presentation formats. Even an online survey that asks users to watch and respond to a multimedia presentation would reveal user reaction. Additional work on the effects of multimedia presentations would certainly circle back and influence the production.

CONSIDERATIONS FOR FUTURE RESEARCH

Comparing the multimedia presentations of the print and broadcast organizations in a single market over a longer period of time could provide a clearer picture of the types of multimedia coverage used with particular stories. Would newspaper websites use

similar multimedia formats to those used on television websites when covering the same story? How would coverage of city layoffs be reflected in the multimedia presentations of a radio station, a television station, and a newspaper? Would there be any at all?

Today multimedia production is expanding and more legacy news media organizations are producing multimedia presentations for websites. When this study was proposed, a limited number of legacy news organizations were regularly creating multimedia presentations, and so the sample was intentionally confined to those news organizations recognized for excellence in producing multimedia presentations. Most newspapers and broadcasters had at least tested the waters of multimedia presentation production, but few had any structure or staff in place to provide a pattern of regular production. Even within the legacy news organizations studied, some multimedia presentation formats appeared so infrequently that it was difficult to make any assessment. There is now an opportunity to expand this research to a larger sample of all newspaper, television and radio websites to monitor the spread of multimedia presentations and watch for changes in formats and characteristics.

The concept of the legacy effect could also be applied to traditional bricks and mortar businesses. For instance, how do the customer service practices of Nordstrom carry over to an online catalog business? This would likely involve more ethnographic research on a single case study. One might also compare a net-born site such as Amazon to a traditional department store. What cultural standards thread through both the online and bricks and mortar stores? More pertinent to the field of communication however is expanding the concept of the legacy effect to the commoditization of information. Financial information hubs such as MarketWatch, CNBC, and Bloomberg could be

analyzed for practices that were created on the floor of the stock exchange. The publishing industry surely extends print practices to the production of ebooks. The digital transformation of many businesses creates opportunity for study.

Researcher bias

There is no doubt that nearly twenty years of working as a television news photographer have given me a particular perspective on the cultures of legacy newsrooms in the United States. I made every attempt to keep my own biases out of both the content analysis and the interviews in this study, but in the same way that truly objective journalism is a myth, I have no doubt tainted this research in some way. I do believe however, that this study is enhanced by the view through the lens of one who has been in the field as a newsworker. One observation from these years of fieldwork relates to the division between word-people and visual-people. Even in the highly visual medium of television news, the reporters and anchors are paid higher salaries than those who shoot and edit video. Managers scrutinize a reporter's script much more carefully prior to air than they do a photographer's video. Certainly in newspapers the visual element of the story is not usually the primary concern of editors. As multimedia presentations become more common, this word-centric hierarchy is threatened. It is no wonder that managers who came up in text-centered newsrooms are reluctant to acknowledge the power shifts. Legacy news managers must realize as well that on the receiving end of these presentations, audiences are turning more and more to highly visual content. Legacy news media organizations are putting material on YouTube, but again, this visual element is often a second thought to traditional distribution.

In addition, I noted that most interviews could not help but be skewed by the subject's position of self-protection. Just as I have grown up in journalism with idealism around the watchdog role and its importance to the democratic process, those interviewed also come with a sense that their work as journalists is important. They believe that no matter what the storytelling method, newsgathering and reporting is a professional calling. Some would argue that legacy news media abandoned serious coverage of government and larger global issues long ago, but even with this awareness, most of these newswriters hope that somehow this new form of delivery called multimedia might change journalism for the better (McChesney, 2003).

THE CHALLENGE OF RAPID CHANGE

Legacy news media personnel may feel mired in their pasts, but the business environment is changing around them and they are constantly trying to alter strategies to keep up with trends. Unlike print organizations that might rework the layout and format once in 10 years, or broadcasters that change a show or set every five years, legacy news websites might be adjusted once a year or more. KGW Media Group adopted a new content management system for its website just as data collection began for this study. National Public Radio made radical changes to its website between the pilot study and the full study. *The New York Times* added the daily "Timescast," and *The Detroit Free Press'* morning webcast has a less prominent place on its website. The pace of change for these legacy businesses is astonishing.

One question that cannot be answered through this study is whether the production and distribution of multimedia presentations change things for journalism as a

whole. That will be answered over time, but at this point legacy news media managers and media watchers wonder whether providing news in a variety of formats can save traditional journalism at all. In studying these legacy media organizations, it is clear they are, to a degree, trapped in the past. As author Mark Briggs said, “The culture will eat strategy for lunch everyday.” The question remains whether the slow cultural shifts, and the production practices that go along with them, will happen in time to save some of these legacy media companies. The goal is to draw more audience to these legacy news organizations’ websites so that eventually the online revenue may provide enough support for survival. Given the audience shift to, and seeming preference for, visual content, multimedia presentations might be the key. Andrew Devigal, Director of Multimedia at *The New York Times* compared “the gray lady” to a ship. He imagines his multimedia division as a tugboat, trying to inch the huge vessel onto a new course. The problem is this navigation is happening in the midst of a tremendous storm. Devigal’s ship has a good chance of surviving the storm on size alone, but there are hundreds of other media ships on the sea. They are all fighting to keep professional journalism alive in some form while much of the audience slides away to Facebook, Google and YahooNews. In this lies the public benefit of legacy media’s move to the Web and into the production of multimedia. The aggregators do not think about the best way to tell a story, but journalists do. Through offering information in a variety of multimedia presentations, some not yet conceived, the legacy media will rise above the noise of Twitter, status updates and check-ins. They will use the talents of journalists to sift and sort and analyze, and then produce a story that not only meets the needs of the audience, but uses the Web to its full extent. There is hope in the passion of those producing

multimedia presentations. They are at the helms of their own tugboats, enthusiastically promoting the new storytelling formats and looking ahead for creative ways to engage the audience.

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Appendix I Pilot Codesheet

Coder ID _____ Media # _____ Date to Web _____ Date of Analysis _____

Definition of Unit of Analysis: Each story is contained as video, audio (with photo & text on page), audio slideshow, or interactive feature. This creates a "multimedia package." The multimedia package is the unit of analysis. Coding will be conducted on the piece saved by the researcher via Iterasi and Jing.

1. Site

NYTimes	=1
CNN	=2
NPR	=3
Slate	=4

2. Media Form

Video - V	=1
Audio - A	=2
Audio Slideshow - AS	=3
Interactive Feature - INT	=4

3. Story Category:

Unable to determine	=0
US	=1
World	=2
Politics	=3
Business	=4
Technology	=5
Recurring Personality	=6
Entertainment	=7

4. # of Related Story Links

5. Explanatory or Caption Text External

None	=0
Longer Story	=1
Shorter Paragraph	=2
Both Longer & Shorter	=3

6. Explanatory or Caption Text Internal

None	=0
Longer Story	=1
Shorter Paragraph	=2
Both Longer & Shorter	=3

7. Ad Present

No	=0
Video Preroll	=1
Audio Preroll	=3
Static Image with Audio	=4
Overlay on material	=5
Write in Sponsor	

If material is a "V" - video - answer questions 8 thru 23. If not skip to question 24

8. Length in Min:Sec**9. Narration Track**

No	=0
Yes	=1

10. Does the reporter's face appear in the story?

No	=0
Yes	=1

11. Does an anchor appear in the story?

No	=0
Yes	=1

12. Is the video a talk-back/interview only?

No	=0
Yes	=1

13. Number of people interviewed w/in story

(distinct individuals interviewed, not number of sound bites)

14. Number of Sound Bites w/in story

(does not include narration tracks)

15. Does the piece contain natural sounds or actualities?

No	=0
Yes	=1

16. Does the piece contain music?

Part of story/scene	=1
Imported	=2

17. Does the piece use other special audio effects?

No	=0
Yes	=1

18. Does the piece use video dissolves or wipes?

No	=0
Yes	=1

19. Does the piece use other special video effects?

No	=0
Yes	=1

20. Other-source video

None	=0
AP	=1
Foreign Press	=2
Other	=3

21. Number of Still Images w/in video story

(these are clearly stills, not simply long video shots that do not move)

22. Text on screen

None	=0
Television Chyron	=1
Software Generated	=2

23. Nature of Text on screen

skip this if answer to x above was "none"

Locator	=1
ID	=2
Translation	=3
Locator & ID	=4
Locator & Translation	=5
ID & Translation	=6
General Information	=7
Program Logo	=8
All forms	=9

If material is an "A" - audio - answer questions 24 thru 30. If not skip to question 31.

24. Length in Min:Sec**25. Number of photos or story-related graphics on page with audio link****26. Origin of Photo**

Unable to Determine	=0
Medium of origin	=1
AP	=2
Getty Images	=3
Any foreign press agency	=4
Other	=5

27. Narration Track

No	=0
Yes	=1

28. Number of people interviewed w/in story

(distinct individuals interviewed, not number of sound bites)

29. Number of Sound Bites w/in story

(does not include narration tracks)

30. Does the piece contain natural sounds or actualities?

No	=0
Yes	=1

31. Does the piece contain music?

Part of story/scene	=1
Imported	=2

32. Does the piece use other special audio effects?

No	=0
Yes	=1

If material is an "AS" - audio slideshow - answer questions 31 thru 30. If not skip to question 38.

33. Length in Min:Sec**34. # of Photos in Audio Slideshow****35. Origin of Photo**

Unable to Determine	=0
Medium of origin	=1
AP	=2
Getty Images	=3
Any foreign press agency	=4
Other	=5

36. Narration Track

No	=0
Yes	=1

37. Number of people interviewed w/in story

(distinct individuals interviewed, not number of sound bites)

38. Number of Sound Bites w/in story

(does not include narration tracks)

39. Does the piece contain natural sounds or actualities?

No =0

Yes =1

40. Does the piece contain music?

Part of story/scene =1

Imported =2

41. Does the piece use other special audio effects?

No =0

Yes =1

If material is an "INT" - interactive feature - answer questions 31 thru 30. If not skip to question 38.

42. What form does the Interactive Feature take?

Timeline =1

Poll =2

Game or Quiz =3

Map =4

Calculator =5

Panorama =6

Graphic =7

Other =8

43. # of Photos in Feature:**44. # of Videos in Feature:****45. # of Audio Clips in Feature:****46. Other-sources used**

No =0

Yes =1

Write in Type (movie, TV, music)

APPENDIX II

Coding Instructions and Final Codesheet

Instructions:

1. Put initials under **coder**
2. **Date** of coding on top of page.
3. Mpeg files are sorted according to source and will be given a number to be recorded in the **Media #** space.
4. **Date to Web** is the date the material appeared on the web, so it should correspond to the file date that piece of media.

Items 1-7: general information for each saved unit of content.

Variable Explanations

1. **Site** The origin of the site will be evident by its file location or when the MP4 is opened. Place appropriate number in the spreadsheet.

2. **Multimedia Format**

Originating spreadsheet should have a letter to indicate which media form it takes, but if coder has a different observation, piece should be questioned and marked as appropriate form.

A = Audio – The play button opens audio-only, but there are photos and text included in the story.

V = Video - All pieces that play beginning to end with at least 5 seconds of in-motion video included – this does not include the “Ken Burns Effect” common on audio-slideshows. Includes computer animations if they play as linear video.

AS = Audio Slideshow Sound under still images (*does* include the “Ken Burns Effect”).

INT = Interactive - May be interactive timeline, poll, game, map, calculator, panoramic photo. These are the pieces where the archivist has manipulated the mouse to get to various pieces within the Interactive Feature.

MP = Multimedia Package - Multimedia content (forms, formats, features) that constitutes a collection of information where: Combinations of formats are presented in a way that sets them apart on the webpage.

- The subject of each format is topically related to the others in the package.
- Three formats are present in the package.
- At least one format has an interactive component.

3. Story Category

Often the media outlet has placed a category on the story – use that if present.

middle east

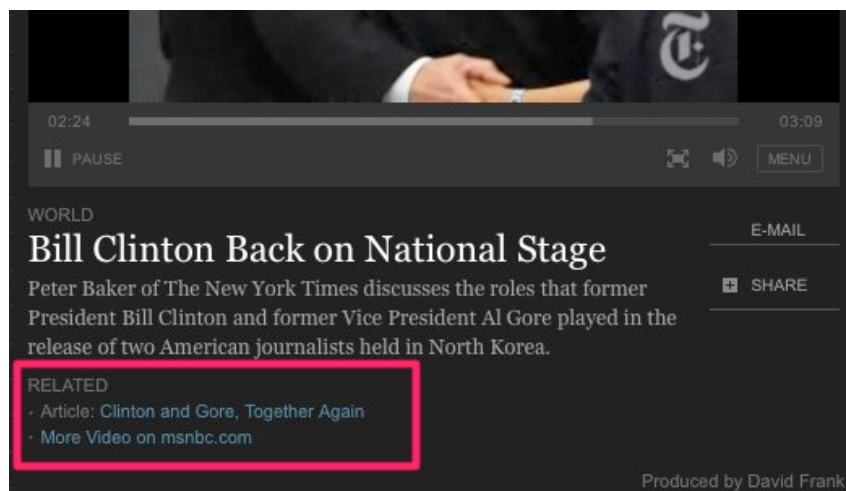
Iran: Ban Strikes

-- for instance this is clearly “world”

Unable to Determine	if the piece does not fit in any category below and/or not shown by website. Or if a set of stories, so does not fit one category.
Local	Any story that is clearly local to that site’s market area. Often crime, roads, schools.
US	United States-based story (or dominantly). If it is the Secretary of State in the US, it is US, but in another country, place in “world.” If troops are shown in Iraq or Afghanistan it is world, if troops are shown coming home or with families, it is U.S.
World	Any story taking place dominantly outside of the US.
Politics	Any story concerning Congress, the President, local politicians. (ex) If the story is on general health care, it belongs in US. If it is on the political debates about health care it is “politics.”
Business	Story is about the state of the stock market, specific businesses, entrepreneurship, CEO profiles.
Technology	Story on new technology, the folding of old technology, personal use of technology. Do <i>not</i> put regular features of personalities in this category, but below.
Recurring Personality	Many features on the web now involve specific people presenting regularly on a specific topic. (ex) David Pogue, Mark Bittman,
Entertainment	Any story concerning celebrities, film or TV industry, movie reviews.

4. # of Related Story Links

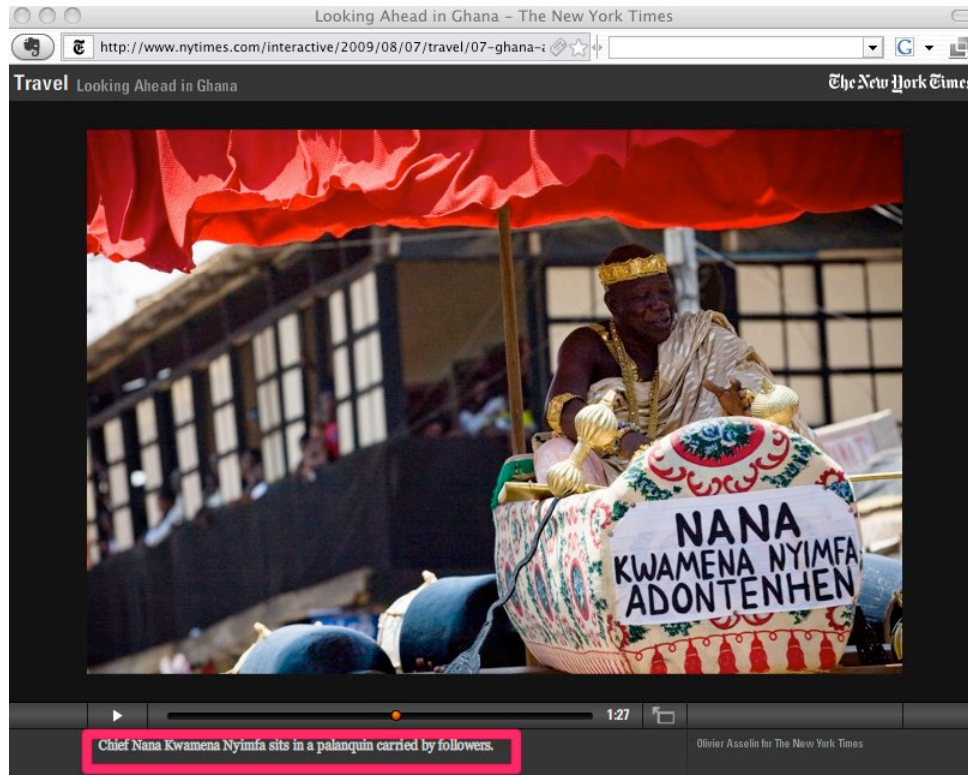
Often the multimedia content will have hypertext links to allow the user to go to stories elsewhere on the site or on other sites to gather more information. Simply record the number of options for linking. In the example below there are two, so enter “2” in the space provided. If there are none enter “0”



The image shows a video player interface with a dark background. At the top, there is a video player with a progress bar showing 02:24 / 03:09. Below the video player, the text "WORLD" is visible. The main title is "Bill Clinton Back on National Stage". Below the title, there is a subtitle: "Peter Baker of The New York Times discusses the roles that former President Bill Clinton and former Vice President Al Gore played in the release of two American journalists held in North Korea." To the right of the subtitle, there are two buttons: "E-MAIL" and "SHARE". Below the subtitle, there is a section titled "RELATED" with two links: "Article: Clinton and Gore, Together Again" and "More Video on msnbc.com". The "RELATED" section is highlighted with a red border. At the bottom right, it says "Produced by David Frank".

Explanatory or Caption Text - Internal

Stories are often accompanied by some sort of text in the form of a short paragraph or caption *within* the playable part of the story (NYT slideshow below – this is part of the AudioSlideshow playing). Sometimes the text is on the left or right side (in the black area) – this would also be considered an internal text.




The screenshot shows a video player interface from The New York Times. The video content displays a Ghanaian chief, Nana Kwamena Nyimfa Adontenhien, seated in a traditional palanquin. The palanquin is decorated with colorful patterns and has a sign that reads "NANA KWAMENA NYIMFA ADONTENHEN". The chief is wearing a gold crown and traditional attire. The video player includes a progress bar at the bottom, a play button, and a timestamp of 1:27. A caption at the bottom of the video reads "Chief Nana Kwamena Nyimfa sits in a palanquin carried by followers." The video is credited to Olivier Asselin for The New York Times.

5. Explanatory or Caption Text - External

Stories are often accompanied by some sort of text in the form of a longer story (Figure 5.a), a shorter paragraph that is a bit of an extended caption (Figure 5.b) or long story segment on the same page with a shorter paragraph or caption (Figure 5.c). These are *outside* the playable part of the story.

Figure 5.a
Roanoke Times

Longer Story
accompanied by video
- no shorter caption



Saved by many hands

When Cunningham arrived at the fire scene, it was obvious to him that the flames blazing from the roof would be impossible to extinguish. They would later learn that the fire probably began when a work crew heated wooden beams to strip off some old paint.

Cunningham approached restaurant owner Harry Leist (rhymes with diced).

"You are going to stand here and watch the roof burn off of your restaurant. There's nothing I can do," the deputy chief said he told Leist. "But if you get enough of your employees to work with our firefighters, we will go in there and carry out anything that is not bolted to the floor."

From that point forward, about half of the 77 firefighters who eventually showed up on the scene worked salvage and overhaul while the rest tried to tame the fire.


They grabbed framed photos of past Norfolk and Western Railroad presidents, paintings, antique furniture and other railroad memorabilia, then ran out and passed it off to employees in the parking lot. The entire time, the roof threatened to collapse and the crowd of onlookers – who came to snap pictures and share a piece of the sorrow with the Leist family – steadily grew.

In the end, firefighters and employees saved just about every antique in the building, including a gorgeous oak buffet that had to be carried out by nine men. They were unable to save a 1913 Nickelodeon piano, which Cunningham said "was just too damn heavy" and too close to the origin of the fire.

Structurally, all that was left of the main dining room and lounge were stone walls and a concrete slab floor. But the Leist family was determined to bring back the Bedford landmark.

"There never was a question in our minds that we would rebuild," said Marty Leist, Harry's wife. "This is what we do."

Video: Liberty Station gets a new look



Video by Jeanna Duerschert | The Roanoke Times

On Feb. 8, less than five months after the devastating fire, Liberty Station restaurant reopened with a new name and much of the "olde" feel.

Rebuilding with help

Harry Leist said he was lucky to have a general contractor for the rebuilding process who had worked on the restaurant before. They stayed as

loyal to the old, historic look as possible. For example, destroyed windows were remade using wood salvaged from the building.

When I went in for lunch last week, it was clear that customers still were absorbing the changes.

Figure 5.b
Spokesman Review

THE SPOKESMAN-REVIEW 73°
5-day forecast

[Topics](#)
[Times](#)
[Places](#)
[Media](#)

Quick links: [Prep sports](#) • [State employee salaries](#) • [WA Primary Election 2011](#) • [News quiz](#) • [Slice blog](#)

February 12, 2010 in City

00:33 01:09

Globe of Thunder

Brothers Cody and Kyle Ives travel the world performing a motorbike stunt known alternately as the Globe of Steel, Globe of Thunder and Globe of Death. They performed in Spokane at the Inland Northwest Motorcycle Show and Sale on Friday, Feb. 12, 2010.

Shorter text accompanying video

Figure 5.c
The New York Times

China Rejects U.S. Complaints on Its Currency

By EDWARD WONG and MARK LANDLER
 Published: February 4, 2010

BELJING — A senior Chinese official said on Thursday that [China](#) would not bow to pressure from the United States to revalue its currency, which [President Obama](#) says is kept at an artificially low level to give China an unfair advantage in selling its exports.

The official, Ma Zhaoxu, a Foreign Ministry spokesman, said at a regular news conference here that “wrongful accusations and pressure will not help solve this issue.”


Mr. Ma was reacting to remarks on trade that Mr. Obama made on Wednesday when he met with Democratic senators in Washington. Mr. Obama stopped short of saying China manipulates its currency, but his words on China’s economic policies were harsh — the United States, he said, had “to make sure our goods are not artificially inflated in price and their goods are not artificially deflated in price and that we do not have a competitive disadvantage.”

Economic assessments of the Chinese currency by 25 to 40 percent compared to the dollar and other currencies. The gap is wider than at any time since July 2005, when the Chinese government, under pressure from the Bush administration, decided to do away with the renminbi’s peg to the dollar and allow the currency to float in a narrow band against the dollar and other currencies.

The renminbi appreciated 21 percent, but since July 2008 it has remained at the same value — today, one dollar equals about 6.83 renminbi, also called the yuan.

Both Longer and Shorter text accompanying video


Enlarge This Image



Adrian Bradshaw/European Pressphoto Agency
 The People's Bank of China in Beijing. Washington wants China to stop depressing its currency.

Related
 Times Topics: China

VIDEO » More Video | Multimedia »



00:30 01:44
 PAUSE

WORLD
China Hits Back in U.S. Yuan Row
 Dismisses Washington's Threat Over its Currency

WATCH TRAILER

TWITTER
 E-MAIL
 PRINT
 REPRINTS
 SHARE

6. Ad Present

- a. Many multimedia content have advertising *attached* to the piece in some way. Some of these are pre-rolls—they run before the video or audio slideshow and cannot be paused or skipped. The question here is the form of the advertisement. If the ad is video, it is a video pre-roll, if it is audio only it is an audio-pre-roll. Sometimes there will be a static image in the player with audio voice-over. And finally, occasionally there is an image overlay of advertising on the piece itself. *In some cases the ad has been noted on the spreadsheet (NPR most notably).*

For Video – a split is identified on the spreadsheet; please answer only questions 8-21 (V).

7. Length in Min:Sec

Most video content will have a running time showing – be sure to wait past the advertisement. The running time usually shows up at the end of the progress bar, but occasionally you need to hover the mouse over to see the time. There are also times when the piece ran longer and that is noted on the originating spreadsheet.

8. Narration Track

This is the voice of a reporter or anchor. There might be someone talking under the images, but you will often see them eventually if they are part of the story itself – if this is the case mark “no.” Narration track often sounds like a broadcaster or storyteller as well.

9. Does the reporter’s face appear in the story?

In television this is often called the “stand-up” and the reporter will be talking and holding a microphone. This category also includes the reporter’s reaction during an interview or the reporter’s participation in the story in some way (trying a food, testing a product, doing any sort of show & tell, a walk-along with the subject of the story).

10. Does an anchor appear in the story?

Some video pieces contain lead-ins by an anchor in a place other than the location of the story. Please note if it is *anyone* different than the reporter in the story even if the anchor does not look like they are on a news set or interview set.

11. Is the video studio produced only?

Some video pieces are straight interviews with a clear questioner and one or two people answering questions or discussing a topic. (an example of this would be Meet the Press, or a straight interview with Katie Couric and President Obama).

12. Is the video sound bites only?

At times video is simply a series of sound bites strung together, or just one bite (long or short).

13. Is the video “raw” or “VO” only?

At times video is shown that has no bites, no narration, no special sound added – such as aerial video, scene without explanation. **Or** if the anchor is just reading over the video.

14. Does the video contain natural sound or actualities?

Natural sound is considered anything included in the piece to give the user/viewer the sense of “being there.” It is *not* simple the background noise behind an interview, but is a punctuation point inserted with intention. Again, if soldiers are fighting and the volume of the shooting is up for a second or two in the piece, that is a natural sound moment. If the natural sound is music and only music, please note it below.

15. Does the piece contain music?

If the music is part of the piece, a radio blaring in a car or a person playing an instrument, then it is “part of.” If it is a theme song for the piece or a music bed for the piece then it is “imported.”

16. Does the piece contain any other special audio effects?

These would include sound effects *clearly* added to give the piece a particular emotion. A cash register ring in an economy story for instance, or screeching brakes to signal something stopping. Any audio that is intentionally sped up or slowed down is an effect, as is any voice that is disguised in any way.

17. Does the piece use video dissolves or wipes?

These are special editing techniques and can convey the passage of time or a change of place. A *dissolve* has been added when you can momentarily see both pictures on either side of a cut in the video. A *wipe* has been added when the transition has a shape (heart, circle, star, oval, blinds) or appears to push one picture off the screen for another.

18. Does the piece use other special video effects?

This category includes picture-in-picture, pixilation of a part of the picture (covering a face or a gesture for instance), highlight of a part of the picture (brighter oval on a football player of note or someone in a photograph of note), any non-word graphic added to the piece (excluding station identifiers), any picture or piece of information that spins or tumbles into the frame.

19. Other Source Video

Some video pieces contain material (all or part) from sources other than the originating media. If there is indication on screen that the material came from the Associate Press (AP), a foreign entity of some kind (CCTV for instance in China, or Al Jazeera), or from something *other* than CNN if you are looking at a CNN piece (eg: station call letter, movie company, etc). *Only note this if it is very clear on the video on the piece.*

20. Number of Still Images w/in the video

Sometimes still shots are used to emphasize the passage of time, or dramatize an event. These are not simply steady long shots of video, but clearly still images. Look for movement of wind in trees, or cars if it is hard to tell. It is OK if there is movement on the photo – a zoom in or pull out – sometimes called the “Ken Burns” effect – it remains a still image upon which movement has been applied. Count the number of these in the piece.

For Audio – a split is identified on the codesheet, please answer only questions 22-35 for content that are marked as audio (A).

21. Length in Min:Sec

Most audio content will have a running time showing or will show the time somewhere on the page – be sure to wait past the advertisement. The running time usually shows up at the end of the progress bar, but occasionally you need to hover the mouse over to see the time.

22. Number of photos or story-related graphics on page with audio link

In order to meet the criteria for “multimedia” audio pieces must be accompanied by two of the following: text, still, computer graphic. Audio pieces will be archived to include this requirement, so count the number of these elements. See the example below where you would count just one photo.

The screenshot shows an NPR article titled "Folsom Embodies California's Prison Blues" by Laura Sullivan. The article includes a photo of Johnny Cash performing in a prison cafeteria. A red box highlights the photo, and a blue arrow points to the photo credit below it: "Dee Power/AP". The article text describes Cash's performance in 1968 and the current state of the prison cafeteria. Below the article, there is a section titled "Origin of Photo" with a photo credit: "Dee Power/AP".

U.S.
Folsom Embodies California's Prison Blues
All Things Considered
Aug 13, 2009 | [More on NPR.org](#)

Support the NPR programming you love.
Become an NPR Sponsor

Transferring data from api.npr.org...

Where a photographer stood 40 years ago and captured Cash's famous concert, an officer now stands in a metal cage. He's armed with three guns and pepper spray.

There are now 15 to 20 assaults a week here at Folsom. And while inmates used to mix with one another, Folsom today is entirely segregated by race — in the cafeteria, on the yard and in the cell blocks.

“
When they're confined in this environment, the

23. Origin of Photo

Note the arrow on example above is pointing to the photo cut line. This is generally where to look for the photo credit. If it is by a photographer who works for the company that produced the piece, mark “medium of origin.” Associate Press and Getty are common, but also look for foreign agency such as Xinhua (China) or Reuters. If there is a name but no affiliation, mark “other.”

24. Narration Track

This is the voice of a reporter or anchor, but sometimes the audio will only be a sound bite or group of sound bites.

25. Is the video sound bites only?

At times video is simply a series of sound bites strung together, or just one bite (long or short).

26. Does the piece contain audience call-in?

If the host of the program takes calls from the audience at any point.

27. Does the piece contain natural sound or actualities?

Natural sound is considered anything included in the piece to give the user/listener the sense of “being there.” It is *not* simple the background noise behind an interview, but is a punctuation point inserted with intention. Again, if soldiers are fighting and the volume of the shooting is up for a second or two in the piece, that is a natural sound moment. If the natural sound is music and only music, please note it below.

28. Does the piece contain music?

If the music is part of the piece, a radio blaring in a car or a person playing an instrument, then it is “part of.” If it is a theme song for the piece or a music bed for the piece then it is “imported.” This does *not* include music played after the reporter’s sign off at the conclusion.

29. Does the piece contain any other special audio effects?

These would include sound effects *clearly* added to give the piece a particular emotion. A cash register ring in an economy story for instance, or screeching brakes to signal something stopping. Any audio that is intentionally sped up or slowed down is an effect, as is any voice that is disguised in any way.

For Audio Slideshows – a split is identified on the codesheet, please answer only questions 31-37 for content that are marked as audio slideshows (ASS).

30. Length in Min:Sec

Most audio slideshows will have a running time showing or will show the time somewhere on the page – be sure to wait past the advertisement. The running time usually shows up at the end of the progress bar, but occasionally you need to hover the mouse over to see the time.

31. Number of photos in audio slideshow

You will already have the total length, but count the number of separate images used in the slideshow if possible. In a three-minute piece there are often 30-40. If the number of shots goes above 70 images, please mark with a “+”

32. Origin of Photo

Note the arrow on example above is pointing to the photo cut line. This is generally where to look for the photo credit. If it is by a photographer who works for the company that produced the piece, mark “medium of origin.” Associated Press and Getty are common, but also look for foreign agency such as Xinhua (China) or Reuters. If there is a name but no affiliation, mark “other.”

33. Narration Track

This is the voice of a reporter or anchor. There might be someone talking under the images, but you will often see them eventually if they are part of the story itself – if this is the case mark “no.” Narration track often sounds like a broadcaster or storyteller as well.

34. Does the piece contain natural sound or actualities?

Natural sound is considered anything included in the piece to give the user/listener the sense of “being there.” It is *not* simple the background noise behind an interview, but is a punctuation point inserted with intention. Again, if soldiers are fighting and the volume of the shooting is up for a second or two in the piece, that is a natural sound moment. If the natural sound is music and only music, please note it below.

35. Does the piece contain music?

If the music is part of the piece, a radio blaring in a car or a person playing an instrument, then it is “part of.” If it is a theme song for the piece or a music bed for the piece then it is “imported.” This does *not* include music played after the reporter’s sign off at the conclusion.

36. Does the piece contain any other special audio effects?

These would include sound effects *clearly* added to give the piece a particular emotion. A cash register ring in an economy story for instance, or screeching brakes to signal something stopping. Any audio that is intentionally sped up or slowed down is an effect, as is any voice that is disguised in any way.

For Interactive Content – a split is identified on the codesheet, please answer only questions 38-42 for content that are marked as interactive features (INT).

37. What form does the Interactive Content take?

Most interactive features on news sites take one of the following forms.

Timeline: As show below, the user can move the mouse over the timeline to reveal different elements in the feature.

Poll: If the user is asked to participate in a poll of any kind. Often they can then see how they compare to others who have taken it.

Game or Quiz: Any feature that asks the user to answer questions with the right/wrong revealed as they go; or any sort of guessing game (matching sounds with photos for instance); any sort of skills game

Map: If the user can move on the map to reveal other features – *not* simply zooming in or out.

Calculator: If user can figure out their house payment or when they can retire, anything that asks the user to put in a number that then produces a answer.

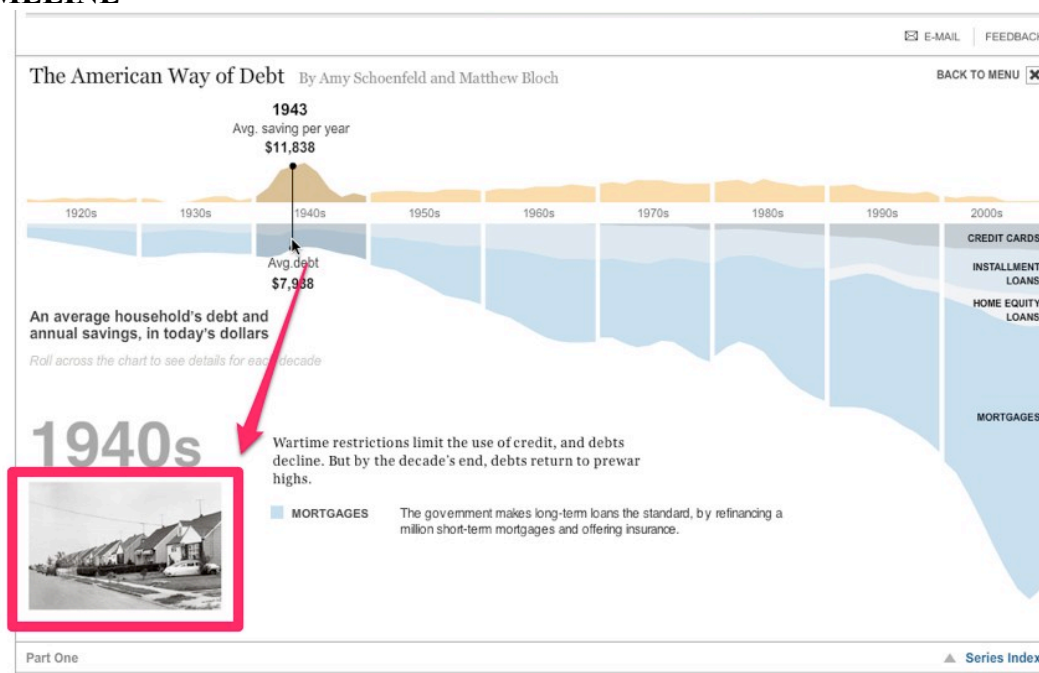
Panorama: Opportunity to control a 360° photo of a specific place.

Graphic: Opportunity to control a graphic and change its form in some way.

38. Number of photos in feature

Count the number of separate images used in the feature if possible. Often they are revealed when you mouse over something as in the timeline example below where the photos change with each decade. If there are over 70 images, please mark with a “+”

TIMELINE



39. Number of videos in feature

Some interactive features contain video segments. Please simply note their presence, there is no need to time them or dissect them as you did with other video. They are very often short clips.

40. Number of audio clips in feature

Separate from the video clips, there are sometimes opportunities to listen to a voice or sound effect within an interactive feature. Record the number of these opportunities. In the example below there are two.

**41. Other sources used in the interactive feature**

If the feature traces the life of a famous person, there will be clips that originated with a moviemaker, television producer, music company, etc. If those credits are there, please note them.

For Multimedia Packages – a split is identified on the codesheet, please answer only questions 43-48 for content that are marked as Multimedia Packages.

42. # of Interactives**43. # of Photos in Feature****44. # of Videos in Feature****45. # of Audio clips in Feature****46. Is MM Pkg a pre-planned special series?**

Something like the State of the Union or the Olympics is a known event and necessitates months of planning websites. Versus an earthquake that has to be constructed as the days go on, but is still given special treatment.

47. Other sources used?

If the feature traces the life of a famous person, there will be clips that originated with a moviemaker, television producer, music company, etc. If those credits are there, please note them.

Final Codesheet

Coder ID _____ Media # _____ Date to Web _____ Date of Analysis _____

1. Site

NYTimes	=1
Freep	=2
Spokesman Review	=3
Roanoke Times	=4
NPR	=5
KCBS	=6
NHPR	=7
CNN	=8
MSNBC	=9
KGW	=10
News10-Syracuse	=11

2. Multimedia Form

Video - V	=1
Audio - A	=2
Audio Slideshow - AS	=3
Interactive Feature - INT	=4
Multimedia Package - MP	=5

3. Story Category:

Unable to determine	=0
Local	=1
US	=2
World	=3
Business	=4
Technology	=5
Recurring Personality	=6
Entertainment	=7

4. # of Related Story Links

5. Explanatory or Caption Text External

None	=0
Longer Story	=1
Shorter Paragraph	=2
Both Longer & Shorter	=3

6. Explanatory or Caption Text Internal

None	=0
Longer Story	=1
Shorter Paragraph	=2
Both Longer & Shorter	=3

7. Ad Present

No	=0
Video Preroll	=1
Audio Preroll	=2
Static Image with Audio	=3
Overlay on material	=4
Both Preroll and Overlay	=5
Write in Sponsor	

If material is a "V" - video - answer questions 8 thru 21. If not skip to question 22.

8. Length in Min:Sec**9. Narration Track**

No	=0
Yes	=1

10. Does a reporter's face appear in the story?

No	=0
Yes	=1

11. Does an anchor appear in the story?

No	=0
Yes	=1

12. Is the video studio-produced?

No	=0
Yes	=1

13. Is the video sound bites only?

No	=0
Yes	=1

14. Is the video "raw" only or voice over?

(natural sound only or read over from studio)

No	=0
Yes	=1

15. Does the piece contain natural sounds or actualities?

No	=0
Yes	=1

16. Does the piece contain music?

No	=0
Part of story/scene	=1
Imported	=2

17. Does the piece use other special audio effects?

No	=0
Yes	=1

18. Does the piece use video dissolves or wipes?

No	=0
Yes	=1

19. Does the piece use other special video effects?

No	=0
Yes	=1

20. Other-source video

None	=0
AP	=1
Foreign Press	=2
Other	=3

21. Number of Still Images w/in video story

(these are clearly stills, not simply long video shots that do not move)

If material is an "A" - audio - answer questions 22 thru 30. If not skip to question 31.

22. Length in Min:Sec**23. Number of photos or story-related graphics on page w/audio [link](#)****24. Origin of Photo**

Unable to Determine	=0
Medium of origin	=1
AP	=2
Getty Images	=3
Any foreign press agency	=4
Other	=5

25. Narration Track

No	=0
Yes	=1

26. Is the piece sound bites only?

No	=0
Yes	=1

27. Does the piece contain call-in?

No	=0
Yes	=1

28. Does the piece contain natural sounds or actualities?

No	=0
Yes	=1

29. Does the piece contain music?

No	=0
Part of story/scene	=1
Imported	=2

30. Does the piece use other special audio effects?

No	=0
Yes	=1

If material is an "AS" - audio slideshow - answer questions 31 thru 37. If not skip to question 38.

31. Length in Min:Sec**32. # of Photos in Audio Slideshow****33. Origin of Photos**

Unable to Determine	=0
Medium of origin	=1
AP	=2
Getty Images	=3
Any foreign press agency	=4
Other	=5

34. Narration Track

No	=0
Yes	=1

35. Does the piece contain natural sounds or actualities?

No	=0
Yes	=1

36. Does the piece contain music?

No	=0
Part of story/scene	=1
Imported	=2

37. Does the piece use other special audio effects?

No	=0
Yes	=1

If material is an "INT" - interactive feature - answer questions 38 thru 42. If not skip to question 43.

38. What form does the Interactive Feature take?

Timeline	=1
Poll	=2
Game or Quiz	=3
Map	=4
Calculator	=5
Panorama	=6
Graphic	=7
Other	=8

39. # of Photos in Feature:**40. # of Videos in Feature:****41. # of Audio Clips in Feature:****42. Other-sources used**

No	=0
Yes	=1

Write in Type (movie, TV, music)

If material is an "MP" - multimedia package - answer questions 43 thru 48

43. # of Interactives**44. # of Audio Slide Shows in Feature:****45. # of Videos in Feature:****46. # of Audio Clips in Feature:****47. Is MM Pkg a pre-planned special series?**

No	=0
Yes	=1

48. Other-sources used

No	=0
Yes	=1

Write in Type (movie, TV, music)

APPENDIX III

Process for Capture/Sample

All material was recorded using [Iterasi](#) a web archive service that includes the ability to schedule and annotate full-site captures. Iterasi does not have video-capture capability and therefore a different capture tool ([Jing](#)) was used to preserve all screen activity in an Mpeg-4 file format. These files were saved to a folder and organized by number and date for full content analysis of each multimedia presentation. Multimedia content appears on several locations even within a single company's legacy media website and thus, in order to capture all multimedia presentations, several pages must be scheduled for archiving. Another difficulty comes with the inconsistency of multimedia production by the media companies selected for research. Unlike textual content analysis of newspapers, television or radio scripts, the content analysis of multimedia relies on material that does not occur on a regularly scheduled basis. In order to record data for examination websites must be archived regularly and from there the multimedia must be preserved for analysis. Therefore as a pilot study I collected data from the following sites five times per day for two weeks (August 10-22, 2009: at approximately 5am, 9am, 1pm, 5pm, and 9pm). This produced archives of over 400 web pages from which to draw multimedia material. Once a website was archived, the steps to preserve multimedia required the use of Jing as a screen capture device to record these presentations for later coding. The steps needed for capture on each site are described in pages that follow.

CNN Main (main page) **<http://www.cnn.com/>**

1. Main page notarized on Iterasi (their term for preserving a site on a specific time and date).
2. For each notarized site (time/date) on Iterasi, copy the first 5 stories in "latest news" (green box) in order to preserve the story line-up – paste them to the Excel sheet (see attached for example of spreadsheet). Column B. Skip "ticker" – a political roundup of day's events (red cross-off).

10. When found save with Jing as piece for evaluation.
 - a. When open Jing is a yellow arc in the upper right of screen.
 - b. Click capture.
 - c. Mark frame to include full screen up to Iterasi edges.
 - d. Click film icon on lower left to capture video.
 - e. When done – stop recording (stop video in frame as well).
 - f. Jing window will come up behind: Save with record number to folder by naming and clicking save icon. Column E.

CNN Video (video page)
<http://www.cnn.com/video/>

1. Main Video page notarize on Iterasi.
2. Capture first five videos on “next up” – right sidebar (green box).

The screenshot shows the CNN Video website. At the top, there are navigation links for 'CNN.com Homepage', 'Feedback', and 'Help', along with a search bar labeled 'search all video'. Below the navigation is a menu with 'Live Video', 'Podcasts', and 'CNN Radio'. The main content area features a large video player with a play button overlay. Below the player, there is a title 'Anger paints health meetings 11:30' and a description: 'How much of the anger at town hall meetings is really aimed at health care reform?'. The source is listed as 'Source: CNN' and 'Added On August 11, 2009'. To the right, there is a promotional graphic for 'GENERATION ISLAM' with the text 'CHRISTIANE AMANPOUR REPORTS FROM GAZA AND AFGHANISTAN' and 'WHAT PATH WILL MUSLIM CHILDREN TAKE? THURSDAY 9PM ET'. Below the main video player, there is a 'NEXT UP' section highlighted with a green box, containing a 'MY PLAYLIST 0' button and a list of video recommendations: 'NOW PLAYING Anger paints health meetings 11:30', 'Beached whale drama unfolds 3:55', and 'Liberian ambassador's mission 8:45'.

3. Copy/Paste titles into spreadsheet. Column B.
4. If there appear to be repeats – check the length of piece and date to confirm and mark “duplicate to: (record number)” in Column D.
5. Using titles on a **new** CNN Video page (since most video links will not play in an Iterasi window) – do a search to bring up video story.
6. Double check for date to confirm it is the same story.
7. Copy/Paste URL into spreadsheet. Column F.

8. When found save with Jing as piece for evaluation.
 - a. When open Jing is a yellow arc in the upper right of screen.
 - b. Click capture.
 - c. Mark frame to include full screen up to Iterasi edges.
 - d. Click film icon on lower left to capture video.
 - e. When done – stop recording (stop video in frame as well).
 - f. Jing window will come up behind: Save with record number to folder by naming and clicking save icon. Column E.

NPR

<http://www.npr.org/templates/story/story.php?storyId=1001>

1. “News” paged notarized on Iterasi.

The screenshot shows the NPR website's 'news' page. The navigation bar includes 'home', 'news', 'arts & life', 'music', 'programs', and 'listen'. A 'news' banner is circled in green. Below it, several news stories are listed, including 'In New Hampshire, Obama Defends Health Care Plan', 'Shriver Remembered For Her Commitment To Service', and 'Rove E-Mails Shed New Light On U.S. Attorney Firings'. A 'the two-way' banner is also visible. A red arrow points to the 'the two-way' banner. A green box highlights a section of stories below the banner, including 'Chechen Rights Worker, Husband Found Murdered', 'U.S., U.N. Condemn Myanmar in Sun Kyt Case', and 'White House Launches Fatherhood Initiative'.

2. Click the five stories below the “2-way” banner (this is the most consistent “top story” area).
3. Copy headlines into spreadsheet. Column B.
4. If there appear to be repeats – check the length of piece and date to confirm and mark “duplicate to: (record number)” in Column D.
5. Click on each to determine if it meets multimedia criteria and note on spreadsheet.
6. If it does meet criteria (has three content form elements).
7. If unplayable in Iterasi window, copy/paste and find file on NPR.org site
8. If audio *and* photo are present – be sure to move NPR player so photo can be seen.
9. When found save with Jing as piece for evaluation.
 - a. When open Jing is a yellow arc in the upper right of screen.
 - b. Click capture.
 - c. Mark frame to include full screen up to Iterasi edges.
 - d. Click film icon on lower left to capture video.
 - e. When done – stop recording (stop video in frame as well).
 - f. Jing window will come up behind: Save with record number to folder by naming and clicking save icon. Column E.

Slate

1. Notarize **News & Politics** on Iterasi
<http://www.slate.com/id/2065896/view/2057069/>
2. Notarize **Business & Tech** on Iterasi
<http://www.slate.com/id/2065896/view/2118124/>

Slate

Experience
Verizon High Speed Internet
(More Consistent Download Speeds Than Dial-Up)

VERIZON HIGHSPEED INTERNET
\$1799
A MONTH, W
1 MBPS FOR

BRIEFING **NEWS & POLITICS** ARTS LIFE BUSINESS & TECH SCIENCE PODCASTS & VIDEO BLOGS

News & Politics

Sarah Palin is afraid Obamacare will put a price on human life. But we already do.
Christopher Beam | PRESCRIPTIONS | Monday, 9:51 PM ET

Four global crises that could ruin your August vacation.
Anne Applebaum | FOREIGNERS | Monday, 8:00 PM ET

Was Bill Clinton's visit to North Korea worth the time, energy, and prestige? No way.
Christopher Hitchens | FIGHTING WORDS | Monday, 11:39 AM ET

Compared with the rest of the Pakistani Taliban, Baitullah Mehsud was an easy target.
Nicholas Schmidle | FOREIGNERS | Friday, 7:27 AM ET

Barack Obama's Facebook news feed.
Christopher Beam and Chris Wilson | POLITICS | Friday, 6:51 PM ET

How is America going to end? The apocalypse you chose.
Josh Levin and Chris Wilson | THE END OF AMERICA | Friday, 2:35 PM ET

3. Notarize **Video & Podcasts** on Iterasi
<http://www.slate.com/id/2065896/view/2182767/>
 - a. video will likely be indicated by the SlateV note (green box).

The Many Voices of Meryl Streep
SLATE V | Friday, 11:07 AM ET

A Wrestler's Wisdom
SLATE V | Wednesday, 1:14 PM ET

4. Note all stories for that day – listed by day – save those headings to spreadsheet.
5. Click on each to determine if it meets multimedia criteria and note on spreadsheet.
6. If unplayable in Iterasi window, copy/paste and find file on Slate site.
7. When found save with Jing as piece for evaluation.
 - a. When open Jing is a yellow arc in the upper right of screen.
 - b. Click capture.
 - c. Mark frame to include full screen up to Iterasi edges.
 - d. Click film icon on lower left to capture video.
 - e. When done – stop recording (stop video in frame as well).
 - f. Jing window will come up behind: Save with record number to folder by naming and clicking save icon. Column E.

NY Times Video
<http://video.nytimes.com/>

1. Main Video page notarized on Iterasi
2. Capture first five of “next up” videos Copy/Paste titles into spreadsheet (green box).







The screenshot shows the NY Times Video website interface. The main video player displays a video titled "Stages of Health Care Reform: Then & Now" by Jackie Calmes & Ben Werschkul, dated August 2009. The video is currently at 00:04 of 08:23. To the right of the video player is a sidebar with a green border containing a "NEXT UP" section. This section lists several video titles under different categories: "Health Care Reform: Then and Now" (Politics), "Critics' Picks: A Streetcar Named Desire" (Movies / Critics' Picks), and "One, Two, Three Rolls You're Out" (Sports). Below the sidebar is a Cisco Collaboration Technologies advertisement with a "Learn how" button.

3. If there appear to be repeats – check the length of piece and date to confirm and mark “duplicate to: (record number)” in Column D.
4. Using titles on **new** NYT Video page – do a search to bring up video story.
5. Double-check for date to confirm it is the same story.
6. Copy/Paste URL into spreadsheet – these should all meet multimedia criteria.
7. If unplayable in Iterasi window, copy/paste and find file on NYTimes video site.
8. When found save with Jing as piece for evaluation.
 - a. When open Jing is a yellow arc in the upper right of screen.
 - b. Click capture.
 - c. Mark frame to include full screen up to Iterasi edges.
 - d. Click film icon on lower left to capture video.
 - e. When done – stop recording (stop video in frame as well).
 - f. Jing window will come up behind: Save with record number to folder by naming and clicking save icon. Column E.

NY Times MM
<http://nytimes.com/pages/multimedia/>

Interactive Material Process

1. Main Multimedia page notarized on Iterasi
2. Hover mouse over **interactives** to determine date of piece – note only the day-of-recording pieces (so as to get only new material). **Must look for differences in page from the previous in order to determine new – look side-by-side.**
3. Copy/Paste URL into spreadsheet.
4. Record interactive with Jing – but also note the permalink because will have to be revisited for coding.
5. **Note below: green box should be recorded, red exes are slideshows and don't meet multimedia criteria, red boxes are interactive but not new.**

<p>SLIDE SHOW: Georgia's Cement Pond The Moose Moss Aquatic Center in Moultrie, Ga., a Deep South farm town, is home to the Moss Farms Diving Tigers -- perhaps the country's most improbable diving powerhouse.</p>		 <p>Interactive Feature</p>
<p>INTERACTIVE FEATURE: Science Quiz: Naming Nature Which one is the bird: chunchuikit or máuts? Take this quiz to see how well you can identify bird names in the Huambisa language of Peru.</p>	<p>1) chunchuikit</p> <p>2) máuts (M)</p>	<p>Timeline: 1969 in Popular Culture The music, movies and events that seemed to sum up the chaos, creativity, violence and hopefulness of the decade.</p> <p>Comment Complete Coverage</p>
<p>SLIDE SHOW: Photo Replay: Aug. 18 The day in sports, including a new, old team logo and a practice round before the P.G.A. Championship.</p>		<p>Mission to the Moon John Noble Wilford, who covered the Apollo 11 mission for The New York Times, narrates a look back at the historic journey.</p> <p>Readers' Moon Memories Moon Odyssey</p> <p>Voices: Recalling 1969 Popular Culture</p> <p>Getting There: 1969 and 2020 Complete Coverage »</p>
<p>SLIDE SHOW: Woodstock. A Look Back Images from the 1969 music festival by Times photographers.</p>		<p>Mission to the Moon John Noble Wilford, who covered the Apollo 11 mission for The New York Times, narrates a look back at the historic journey.</p> <p>Readers' Moon Memories Moon Odyssey</p> <p>Voices: Recalling 1969 Popular Culture</p> <p>Getting There: 1969 and 2020 Complete Coverage »</p>
<p>SLIDE SHOW: A Mill Town Moves On In 1993, a paper mill, built in Augusta, Me., in 1830, employed more than 500 people. Soon after, though, the mill closed, reopened, then closed again, and now it is being demolished.</p>		<p>Mission to the Moon John Noble Wilford, who covered the Apollo 11 mission for The New York Times, narrates a look back at the historic journey.</p> <p>Readers' Moon Memories Moon Odyssey</p> <p>Voices: Recalling 1969 Popular Culture</p> <p>Getting There: 1969 and 2020 Complete Coverage »</p>
<p>AUDIO SLIDE SHOW: Looking Ahead in Ghana The Oguaa Fetu Afahye festival is a monthlong celebration in Cane Coast</p>		<p>Mission to the Moon John Noble Wilford, who covered the Apollo 11 mission for The New York Times, narrates a look back at the historic journey.</p> <p>Readers' Moon Memories Moon Odyssey</p> <p>Voices: Recalling 1969 Popular Culture</p> <p>Getting There: 1969 and 2020 Complete Coverage »</p>


6. Save with Jing as piece for evaluation.
 - a. When open Jing is a yellow arc in the upper right of screen.
 - b. Click capture.
 - c. Mark frame to include full screen up to Iterasi edges.
 - d. Click film icon on lower left to capture.
 - e. **Mouse over as many of the elements as time (5 mins) will allow in order to capture the separate elements.**
 - f. When done – stop recording (stop video in frame as well).
 - g. Jing window will come up behind: Save with record number to folder by naming and clicking save icon. Column E.

Audio Slideshow Material Process

1. Main Multimedia page notarized on Iterasi
2. Hover mouse over audio slideshow to determine date of piece – note only today's. **Must look for differences in page from the previous in order to determine new – look side-by-side.**


🔊 AUDIO SLIDE SHOW: Looking Ahead in Ghana

The Oguaa Fetu Afahye festival is a monthlong celebration in Cape Coast.



📷 SLIDE SHOW: Aircraft Collide Over the Hudson


A small plane carrying three people and a tourist helicopter carrying six collided midair and plunged into the Hudson river.



🔊 AUDIO SLIDE SHOW: Kid Stuff

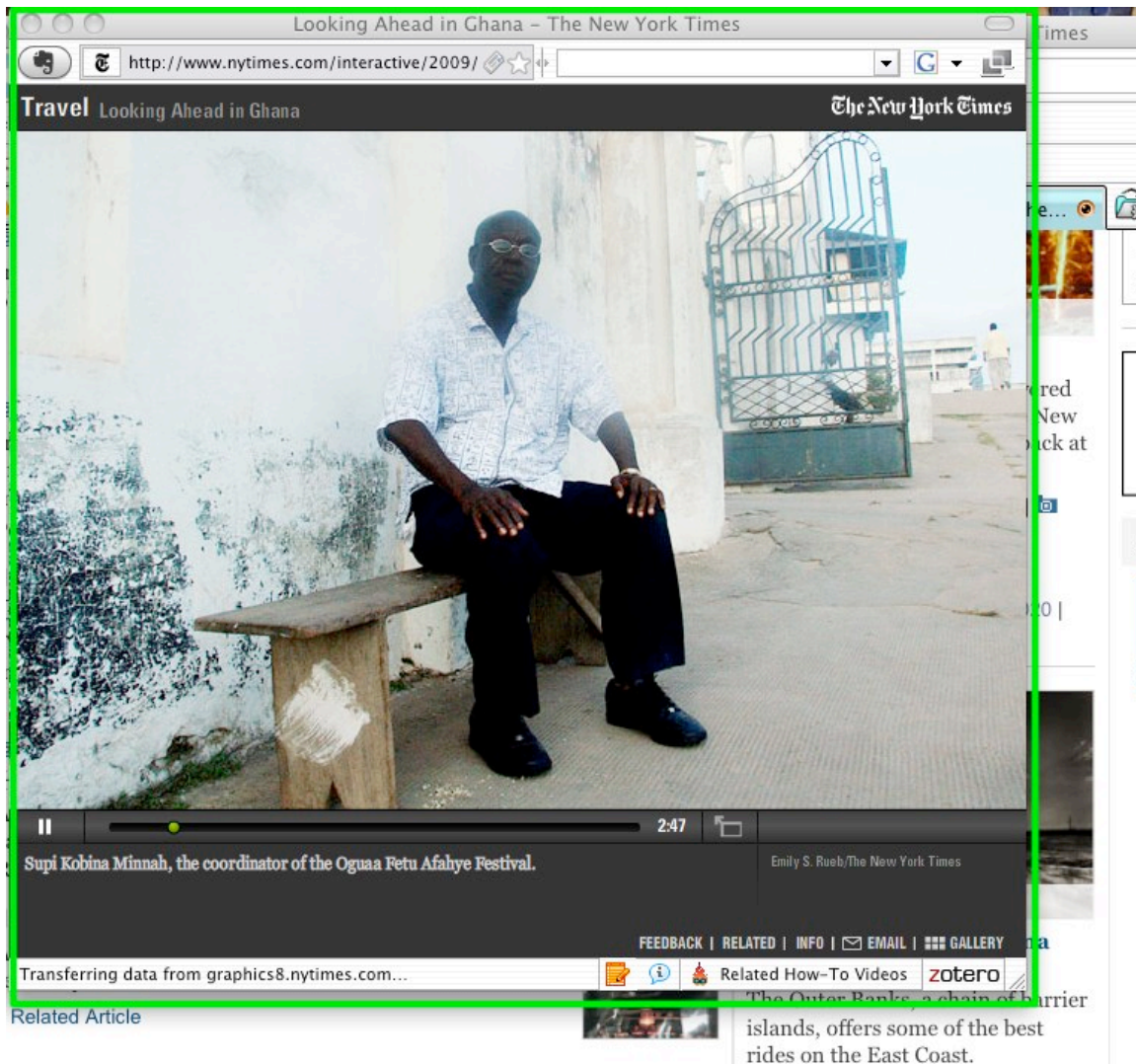
A. O. Scott discusses the films of the summer and their tendency to treat audiences like children.

• Related Article



3. Copy/Paste URL into spreadsheet.
4. If unplayable in Iterasi window, copy/paste and find file on NYTimes site

5. A separate window will open – choose “this window” and record (Jing) play the audio slideshow.



6. When found save with Jing as piece for evaluation.
 - a. When open Jing is a yellow arc in the upper right of screen.
 - b. Click capture.
 - c. Mark frame to include full screen up to Iterasi edges.
 - d. Click film icon on lower left to capture video.
 - e. When done – stop recording (stop video in frame as well).
 - f. Jing window will come up behind: Save with v-# to folder by naming and clicking save icon. Column E.

Social Network and Feedback opportunities

All of the elements above have some link to sharing, commenting or providing feedback to the producers. They vary from entity to entity and even within certain media, but can be outlined as follows:

NYTimes.com:

- **Video site offers:** the opportunity to email the piece or share on LinkedIn, Mixx, Digg, MySpace, Facebook and Yahoo. There is also a permalink posted.
- **Audio Slideshows offer:** offers the opportunity to email the piece, feedback (email to the Times), related (links to articles), and info (the permalink and name of producers).
- **Interactive Features:** recommend (simply an approval meter – no space to write), the opportunity to email the piece, or LinkedIn, Mixx, Digg, MySpace, Facebook and Yahoo. There is also a permalink posted.

Slate:

- **SlateV (video site):** opportunity to email the piece, a link/URL to the story (permalink), embed code, “blog this,” RSS subscription opportunity.
- **Slate Articles:** discuss (forums), opportunity to email the piece, RSS and share to Yahoo, Facebook, Mixx, Digg, Reddit, Delicious, Furl, Magnolia, Sphere, StumbleUpon.

CNN

- **CNN Video:** embed, email, share to Mixx, Digg, Facebook, Reddit, StumbleUpon, MySpace, Delicious
- **CNN Main page:** email, share to Mixx, Digg, Facebook, Reddit, StumbleUpon, MySpace, Delicious

NPR

- All pages offer: email opportunity, comment (forum), recommend (approval meter), and share to Delicious, Mixx, Digg, Facebook, Reddit, StumbleUpon, Yahoo.

Appendix IV

Example of Capture Log

A Date/Time	B Story Headline	C In-Story Link	D Click Result	E Content ID	F URL
8/3/09 3p	CNN-Main				
	1-White House: No tax hike for middle class 46 min	Geithner's comments Report on Tax issues Gibbs vows no tax hike Romer's view on economy McCains comments	V=5	v001 v002 v003 v004 v005	
	2-Researcher says he found malaria's origin 56 min		no		
	3-Four earthquakes hit Mexico's Gulf of California		no		
	4-Jackson's mom gets custody of his kids		V=1		
				v006	
	5-Al Qaeda No. 2 slams Obama's first months		no		
	CNN-Video				
	1-Middle class tax hike?			v007	http://www.cnn.com/video/#/video/politics/2009/08/03/dcl.lothian.middle.class.cnn?iref=videosearch
	2-Cash for Clunkers lifts sales			v008	http://www.cnn.com/video/#/video/business/2009/08/03/biz.bulletin.monday.cnn?iref=videosearch
	3-Dog attacks own reflection			v009	
	4-Bomb attack in Afghanistan			v010	
	5-Jackson's mom gets custody			v011	
	Slate B&T		none for date		
	Slate N&P				
	1-How is America going to end? Slate's "Choose Your Own Apocalypse"		I=1	v012	http://sdn.slate.com/features/endofamerica/default.htm
	2-What a Japanese community festival tells us		no		

3-The depressing yet inspiring race for mayor of Flint, Mich. no

Slate Pods & Video

1-Dear Prudence: Dad Caught Cheating V=1 v013

NPR

1-Judge Names Michael Jackson's Mom As Guardian no

2-China Seals Off Northwest Town As Plague Kills 2 no

3-Citing Competition, Google CEO Leaves Apple Board no

4-Snoring Can Indicate Treatable Sleep Condition I=1, A=1 v015, v014

5-Will U.S. Move Toward European Capitalism? A=1 v016

NYTimes Video

1-Shockwaves through my soul V=1/3 segs v017, v018, v019

2-Cash for Clunkers V=1

3-Obama on the Economy V=1

4-A year of Stuggle at the Food Bank V=1

5-Paco: Argentina's Ongoing Struggle V=1

Audio+Adjacent Presentations

Example of coding common to all formats								Example of coding fro audio+adjacent									
	st	med	sc	#r	ectc	ecti	ad		len	# si	org	narr	# int	# bit	nats	mus	afx
20001	1	1	6	1	0	2	1	mda									
20002	1	1	1	1	2	0	1	cisco									
20003	1	1	6	0	2	0	1	cisco									
20004	1	1	2	0	1	0	1	cisco									
20005	1	1	2	0	2	0	1	cisco									
20006	1	1	1	1	2	0	1	att									
20007	1	1	6	1	2	0	0										
10010	1	3	4	0	0	2	0										
10011	1	3	2	0	0	2	0										
10012	1	3	1	1	2	0	0										
10013	1	3	1	1	2	0	0										
10014	1	4	0	0	2	4	6	l.dev									
10015	1	4	1	1	2	3	6	ups									
10016	1	4	1	1	2	0	0										
20024	2	1	2	1	2	0	1	gen mill									
20025	2	1	1	1	2	0	0										
20026	2	1	4	0	0	0	1	fort									
20027	2	1	1	1	2	0	1	meta									
20028	3	2	5	4	3	0	0		5:26	2	5	1	3	6	0	0	1
20029	3	2	1	0	3	2	0		4:01	1	2	1	5	6	1	0	0
20030	3	2	4	1	3	2	3	npr	4:30	1	0	1	3	4	1	2	0
20031	3	2	1	0	2	0	3	npr	3:41	1	0	1	4	5	1	0	0
20032	3	2	1	2	3	2	0		3:25	1	1	1	3	5	1	0	0

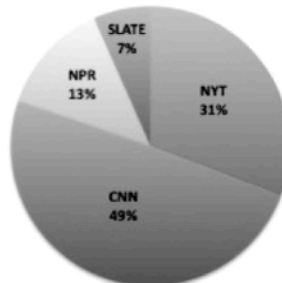
Interactive Presentations

Example of coding common to all formats									Example of coding interactives				
	st	med	sc	#r	ectc	ecti	ad		intfr	#si	#vid	#aud	os
20001	1	1	6	1	0	2	1	mda					
20002	1	1	1	1	2	0	1	cisco					
20003	1	1	6	0	2	0	1	cisco					
20004	1	1	2	0	1	0	1	cisco					
20005	1	1	2	0	2	0	1	cisco					
20006	1	1	1	1	2	0	1	att					
20007	1	1	6	1	2	0	0						
10010	1	3	4	0	0	2	0						
10011	1	3	2	0	0	2	0						
10012	1	3	1	1	2	0	0						
10013	1	3	1	1	2	0	0						
10014	1	4	0	0	2	4	6	l.dev	8	26	0	6	0
10015	1	4	1	1	2	3	6	ups	6	1	0	0	0
10016	1	4	1	1	2	0	0		8	14	0	4	0
20024	2	1	2	1	2	0	1	gen mill	8	35	0	3	0
20025	2	1	1	1	2	0	0		6	1	0	0	0
20026	2	1	4	0	0	0	1	fort		77			
20027	2	1	1	1	2	0	1	meta					
20028	3	2	5	4	3	0	0						
20029	3	2	1	0	3	2	0						
20030	3	2	4	1	3	2	3	npr					
20031	3	2	1	0	2	0	3	npr					
20032	3	2	1	2	3	2	0						

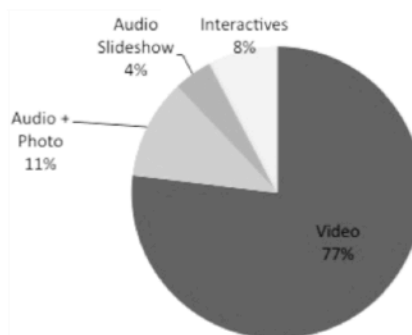
APPENDIX VI PILOT RESULTS

Total multimedia presentations n=99

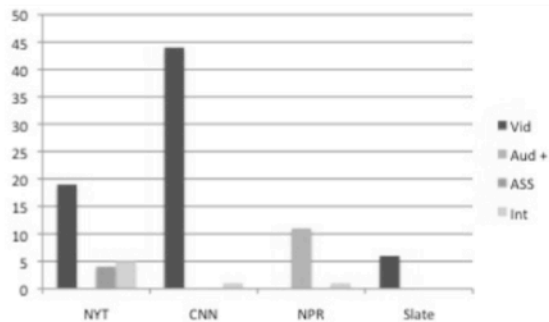
SITE	TTL MULTIMEDIA
New York Times	28
CNN	45
NPR	12
Slate	6



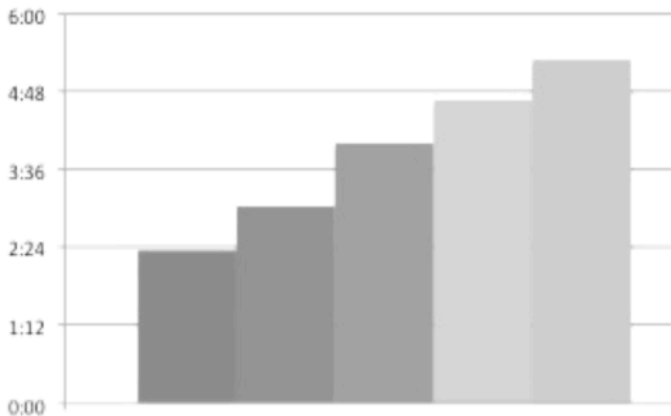
MEDIA TYPE	TTL MULTIMEDIA
VIDEO	70
AUDIO +	10
AUDIO SLIDESHOW	4
INTERACTIVE	7




























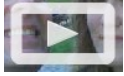



	NYT	CNN	NPR	Slate
VIDEO	19	44	0	6
AUDIO +	0	0	11	0
AUDIO SLIDESHOW	4	0	0	0
INTERACTIVE	5	0	1	0



CNN VIDEO	2:21
SLATE	3:05
NYT VIDEO	4:00
NPR	4:40
CNN (TALK)	5:17



APPENDIX VII Multimedia Icons and Hyperlinks

	Video	Audio+Photo	Slideshows	Interactive
New York Times	 Video:		 AUDIO SLIDE SHOW	 Interactive
Detroit Free Press			NEWS GALLERIES	Interactive
Spokesman Review	 Video	 Audio	 Audio slideshow	-----
Roanoke Times		 Listen	Photo galleries	Interactives
NPR	Watch The Video			
KCBS			 view thumbnails	-----
NHPR	VIDEO:		 PHOTOS	-----
CNN	 VIDEO			 CNN CHALLENGE
MSNBC.com		Audio:		INTERACTIVE
KGW				-----
YNN		-----	Photostream	-----

APPENDIX IX
Reliability

		Percent Agreement	Scott's Pi	N Agree	N Disagree	N Cases	N Decisions
1	SITE	100	1	109	0	109	218
2	MEDIA TYPE	97.24	0.94	106	3	109	218
3	STORY CATEGORY	75.22	0.68	82	27	109	218
4	RELATED STORY LINKS	75.22	0.42	82	27	109	218
5	EXTERNAL EXPLANATORY TEXT	72.47	0.60	79	30	109	218
6	INTERNAL EXPLANATORY TEXT	88.99	0.40	97	12	109	218
7	ADVERTISING PRESENT	79.81	0.65	87	22	109	218
8	VID NARRATION	86.23	0.78	94	15	109	218
9	VID REPORTER	87.15	0.79	95	14	109	218
10	VID ANCHOR	92.66	0.88	101	8	109	218
11	VID STUDIO	72.47	0.58	79	30	109	218
12	VID SOUND BITES	87.15	0.78	95	14	109	218
13	VID RAW	84.40	0.73	92	17	109	218
14	VID NATURAL SOUND	82.56	0.73	90	19	109	218
15	VID MUSIC	93.57	0.89	102	7	109	218
16	VID AUDIO EFFECTS	97.24	0.94	106	3	109	218
17	VID DISSOLVE	84.40	0.75	92	17	109	218
18	VID VIDEO EFFECTS	81.65	0.72	89	20	109	218
19	VID OTHER SOURCE	89.90	0.82	98	11	109	218
20	VID # OF PHOTOS	88.07	0.61	96	13	109	218
21	AUD # OF PHOTOS	80.73	0.46	88	21	109	218
22	AUD ORIGIN OF PHOTO	77.98	0.43	85	24	109	218
23	AUD NARRATION	91.74	0.82	100	9	109	218

24	AUD SOUND BITES	94.49	0.88	103	6	109	218
25	AUD CALL-IN	96.33	0.91	105	4	109	218
26	AUD NATURAL SOUND	85.32	0.69	93	16	109	218
27	AUD MUSIC	96.33	0.92	105	4	109	218
28	AUD AUDIO EFFECT	100	1	109	0	109	218
29	ASLIDESHOW # OF PHOTOS	100	1	109	0	109	218
30	ASLIDESHOW ORIGIN OF PHOTOS	100	1	109	0	109	218
31	ASLIDESHOW NARRATION	100	1	109	0	109	218
32	ASLIDESHOW NATURAL SOUND	100	1	109	0	109	218
33	ASLIDESHOW MUSIC	99.08	0.49	108	1	109	218
34	ASLIDESHOW AUDIO EFFECTS	100	1	109	0	109	218
35	INTERACTIVE FORM	98.16	0.66	107	2	109	218
36	INT # OF PHOTOS	100	1	109	0	109	218
37	INT # OF VIDEO CLIPS	99.08	0.66	108	1	109	218
38	INT # OF AUDIO CLIPS	100	1	109	0	109	218
39	INT OTHER SOURCES	99.08	0.88	108	1	109	218
40	MMP # OF INTERACTIVE PRESENTATIONS	99.08	0.49	108	1	109	218
41	MMP # OF AUDIO CLIPS	100	1	109	0	109	218
42	MMP # OF VIDEO CLIPS	100	1	109	0	109	218
43	MMP # OF ASLIDESHOWS	100	1	109	0	109	218
44	MMP PRE-PLANNED SERIES	99.08	0.49	108	1	109	218
45	MMP OTHER SOURCES	100	1	109	0	109	218

APPENDIX IX TAMS Code List

Assignments:

- How has story-assigning changed?

Audience:

- How is audience response influencing decision-making?

Background:

- How has the background of the newsworker influenced how they do work with multimedia?

Culture:

- What are the differences between newsroom cultures (newspaper, radio, TV) if the newsworker has worked in both?

Difference:

- Differences between Medium of Origin and Media on Web: such as visual v. words, etc. -- also difference between TV & other legacy media

Economy:

- Has the current economy caused issues for multimedia production? Fewer people doing multimedia, younger out first, etc?

Entrepreneur:

- Is there an entrepreneurial spirit in the organization? Did a group in the newsroom kind of start things up themselves?

Future:

- Talking about future of multimedia/journalism.

Management Attitudes:

- Does management dictate how multimedia is done? Are they on board with multimedia production?

Media of Origin:

- How much of a burden or help is the originating media format?

Organizational History:

- Where have current practices come from?

Priority Media of Origin:

- Is priority given to the Media of Origin at all times? To air first? To print first?

Risk:

- Is the organization willing to take risks to move forward on multimedia?

Speed:

- Is it faster or slower to get things done for the web than to get them into the old medium?

Tech Adoption:

- How did the organization do with adoption of the new technology? Organic? Top-down?

Training:

- Has training been provided by the company? Encouraged?

VITA

Margaret (Peg) Achterman is a native of the Pacific Northwest and a 30-year resident of Seattle. She earned a Bachelor of Arts in Communication at the University of Washington, followed by a Master of Science in Telecommunications at Syracuse University. For nearly 20 years Peg worked as a television news photographer KTUU in Anchorage, Alaska and KING in Seattle. In 2012, she earned a Doctor of Philosophy in Communication at the University of Washington.