Multimedia framing in U.S. newspapers' online coverage of the Iraq War

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Abstract

Bartosz W. Wojdynski: Multimedia framing in U.S. newspapers' online coverage of the
Iraq War
(Under the direction of Anne Johnston)

This thesis examined the utilization of multimedia by U.S. newspaper Web sites in covering the Iraq War in 2007, and its role in framing aspects of the War. A total of 201 photo galleries, audio slideshows, interactive graphics, and interactive packages were analyzed from the 100 most-visited U.S. newspaper sites. Dominant textual and visual frames were coded for each story, along with framing dimensions including main subject, time and space.

The study concluded that human interest framing dominated multimedia coverage, although the extent of such framing differed between multimedia story types. Nearly three-quarters of the stories (72.1%) utilized a human interest textual frame, and 81.1 percent of stories featured a human interest visual frame. Multimedia coverage of the war primarily told the stories of individual U.S. stories and their families. The results showed that newspapers with a larger online readership were more likely to feature multimedia coverage of the war.

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Introduction

The U.S. War in Iraq has dominated media coverage since its inception in March 2003. Although the original conflict lasted approximately five weeks, the occupation of Iraq by U.S. forces has continued as the soldiers attempt to rebuild Iraqi infrastructure while fighting insurgents. As the United States occupation of Iraq continued and casualties mounted, online media outlets began to use multimedia technology – Flash-based features, SoundSlides, and other digital platforms – to tell the stories of this War like no war before it. Interested readers/viewers were able to navigate on their own through depictions of individual soldiers' tales from the frontline, of engaging in combat, biding their time in a foreign country, and of dealing with wounds sustained in battle and the loss of their fellow soldiers. Images, sound, and video tell the stories of war and its casualties more vividly than text. Much like during the Vietnam War, when the nation's ideas and opinions may have been influenced by unprecedented television coverage (Howell, 1987; Huebner, 2005), the Iraq War has been the first major U.S. war which Americans have followed via the World Wide Web and its media technologies (Berenger, 2006). Although the use of multimedia platforms for news cannot yet be considered widespread, the asynchronous and ubiquitous nature of the Web allows that online content available to an audience that spans geographical borders for years after its original publication.

The purpose of this thesis was to analyze how elements of online multimedia stories were utilized in framing 2007 coverage of the Iraq War. Although other content

analyses of Web content have appeared in the mass communication literature, the nature of Web content has continued to change throughout its first decade of use. The widespread dissemination of broadband access through cable and digital subscriber line (DSL) connections – which nearly half of adult Americans now have at home (Horrigan & Smith, 2007) – has facilitated much faster transfer of data on the Web, and content producers have taken advantage of this by enhancing or replacing textual content with images, video, and new multimedia platforms that combine the aforementioned media. Audio slideshows, photo galleries, interactive graphics, and other forms of multimedia presentations allow newsrooms to present content that not only provides a multi-sensory experience to the viewer, but allow the viewer to interact with the content through navigation and other interactive features (Deuze, 2004). Newsroom staffs have been reorganized to meet the demands of a 24-hour news cycle and to assist in the gathering and production of content that utilizes the ability of the Web to rapidly disseminate increasingly complex and dynamic media content (Stepp, 2007).

This study analyzed how online newspaper Web sites framed the Iraq War through the use of multimedia from January 1 through December 31, 2007, spanning the end of the fourth and most of the fifth year of the conflict in Iraq. Web sites affiliated with newspapers have been among the leaders in the adoption of multimedia platforms that diverge from traditional text-only or video-only models of media presentation. As more newspapers enhance their print coverage with online-only content, readership of online newspaper sites has continued to grow, at approximately twice the rate of other Web sites. (Kaplan, 2007). The Iraq War is the first major military conflict to be covered extensively using online multimedia stories (Dimitrova & Neznanski, 2006, ¶ 36), and

multimedia reports by newspapers have been recognized for their contribution to coverage. *The Rocky Mountain News'* "Final Salute," a Flash presentation about the funerals of several armed forces officers killed in Iraq, netted Pulitzer Prizes for Feature Writing and Feature Photography for the content team of Jim Sheeler and Todd Heisler, respectively. Iraq War coverage has also dominated the SNDies, the Society of News Design's annual awards for excellence in multimedia journalism. By analyzing the use of sound, images, and text in the multimedia coverage of the War, this study examined the roles these components play in the narrative and visual framing of news.

As multimedia news platforms become common on the Web, it becomes increasingly important for scholars to re-evaluate their criteria for measuring and analyzing the content of media messages. Not only do these stories combine the modalities of text, audio, still images, and video, but they also more importantly introduce new abilities for users to tailor their experience by navigating through and interacting with the story. While these developments may have no bearing on societal media effects approaches, individual-level effects theories such as framing and priming would benefit from new models and methods that address multiple modalities through which audiences receive and process information.

Literature Review

The idea that news media "frame" information in a way that directly affects the consumers' perception of the information takes root in cognitive psychology. Erving Goffman, credited with the origin of the concept, wrote that individuals interpret events through reliance on frameworks, each of which allows them to "locate, perceive, identify, and label a seemingly infinite number of concrete occurrences defined in its terms (1974, p. 21)." These frames function as internal mental structures that serve two functions: to organize existing information and to facilitate the processing of new information in terms that humans can understand. As an example, he offers the "presentation of weather as in a report (p. 229)," which leads to a familiar shorthand for describing phenomena. Goffman's work has informed various disciplines in the social sciences and humanities, including economics (Kahneman and Tversky, 1984) and sociology, but it also set the stage for the theory's application as a widely used theory of media effects in communication research (see Weaver, 2007).

Entman (1993) argued for the incorporation of framing as theoretical underpinning for the academic study of communication. Framing provided a cognitive theoretical model for how information presented through mass communication channels influences the way individual recipients see the world. Entman wrote that news media frame information by "select[ing] some aspects of a perceived reality and make them more salient in a communicating text, in such a way as to promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation for

the item described (p. 52)." These frames in a text are "manifested by the presence or absence of certain keywords or stock phrases, stereotyped images, sources of information, and sentences that provide thematically reinforcing clusters of facts or judgments" (p. 52). A further clarification was offered by Reese (2001), drawing on framing work in various fields, offered the following working definition of a frame: "Frames are organizing principles that are socially shared and persistent over time, that work symbolically to meaningfully structure the social world (p. 11)" Entman argued that since salience is a product of interaction between readers of a text and the text itself, the presence of frames in a text does not guarantee the transmission of frames to the receiver. This application of Goffman's concept to the study of communication has informed a number of research approaches and methodologies concerned with parsing the nuances of how media affect opinion formation. While Entman's work was influential, scholars remain divided on the role of framing in mass communication studies.

Scheufele (1999) disagreed with Entman as to the nature of the cognitive effects of framing in mass communication. Scheufele parsed a distinction between measures of salience and measures of "perceived importance," in the process highlighting a difference between framing effects and those theorized under the paradigms of agenda-setting and priming. While the latter two disciplines are primarily concerned with salience, framing effects are seen as dealing with perceived importance. This distinction can also be categorized as between *accessibility effects*, which make particular information more easily accessible or recalled, and *applicability effects*, which involve the forming of new associations or opinions (Scheufele, 1999; Scheufele & Tewksbury, 2007). Applicability effects influence directly the way in which individuals frame and organize information,

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and thus are likely to manifest themselves much longer after exposure to the information than accessibility effects.

Pan and Kosicki (1993) offered a constructive approach to the study of framing by identifying four key structures which are used in the framing of a text. These were syntactical structures (words and phrases themselves), script structures (the organization of news to fit pre-existing or familiar narratives), thematic structures (involving the explanation of cause), and rhetorical structures (stylistic choices in written and visual depictions).

The transfer of frames and framed information has been modeled in several different processes that are not limited to monolithic sender-receiver roles for media and audiences. Framing transfer can be seen as occurring in several critical junctures related to the production and consumption of media: internal (editorial and business) influences on the production of news stories, the influence of media frames on individual frames, and the influence of individual frames on individual outcomes. Scheufele (1999) described these as occurring as part of a 2-by-2 typology, in which research can focus on either media frames or individual frames (or both), and each can be treated as an independent or dependent variable. Studies focusing on individual frames as a dependent variable analyze the effects of manipulating media frames of an issue on readers' or viewers' perception of that issue. These cognitive effects themselves may be viewed as significant in terms of individual-level effect of framing (Scheufele, 1999). However, the greater significance of changes in individual frames is their influence on individuals' attitudes, behaviors, behavioral intentions, and other measurable variables, which have also been analyzed by researchers. Scholars are in dispute about the role of time in the

influence and manifestations of framing effects. Because theoretical models of framing hold that the effect is one of changed perception, not ease of recall, it stands to reason that framing effects are more durable than accessibility effects (Scheufele & Tewksbury, 2007).

The Influence of Media Frames. The most conclusive evidence for the influence of media frames on audience knowledge and attitudes has emerged from experimental studies which treat media frames as an independent variable and individual frames as a dependent variable. The manipulation of media frames has been accomplished by changing lead or closing paragraphs (Price, Tewksbury, & Powers, 1997), images accompanying news content (Arpan, Baker, Lee, Jung, Lorusso, and Smith, 2006), and other elements of the news story. While these studies necessitate a short-term view of the cognitive influence of media frames, studies occurring over a longer period of time would require hermetically restricting subjects' exposure to other mediated and interpersonal communication.

Early studies focused on the effects of framing particular issues on how audiences interpreted causality and attribution of fault for those issues. Iyengar (1991) identified two broad classifications of frames for an issue or problem: thematic and episodic. He found that television news reports seldom present events in the context of larger social issues or themes, choosing instead to focus on the events themselves. Iyengar found that news readers exposed to episodic framing of a social problem were more likely to attribute responsibility to the individuals depicted in the story, while exposed to thematic framing a social issue were more likely to ascribe fault and responsibility to larger societal forces. Other studies have found particular frames may influence viewer

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attitudes through interacting with pre-existing schema viewers may hold on a particular issue (Shen, 2004).

Non-experimental studies have also found evidence for transfer of media frames to audiences by combining content analysis with survey data, utilizing an approach similar to cultivation research. If a particular media frame of an issue predominated, and that frame was espoused by more frequent users of a particular medium, the authors concluded framing effects. Iyengar and Simon (1993) found that television coverage of the Gulf War was heavily slanted toward official U.S. sources positions, and respondents who watched a higher level of television news coverage of the Gulf War were more likely to support the administration's policy than those who watched less. Similarly, Scheufele, Nisbet, and Ostman (2005) utilized prior content analyses of post-September 11th newspaper and television coverage in their findings that heavy television viewers supported the dominant television framing of expansion of police powers, while heavy newspaper readers supported the dominant newspaper framing of the issue.

While both the experimental and cultivation-influenced methods are the primary sources for direct evidence of the influence of media frames on audience perception, the most widely used mass communication research method that has been informed by framing theory is content analysis (Riffe, et al., 2005; Hertog & McLeod, 2001). Given evidence that that media frames are influential, many scholars have chosen to focus on analyzing the media content as a means of understanding how news events and ongoing political issues are covered in the press. The use of content analysis to study media frames has spanned a wide variety of media, and even broader range of studies. Such studies have included comparisons of the framing of two different news events (e.g.,

Entman, 1991), comparisons of how the same event was covered in different countries (e.g., Dmitrova & Connolly-Ahern, 2007) or descriptive analyses of how particular issues were covered in the press during a political campaign (D'Angelo, Calderone, & Territola, 2005).

Multidimensional Approaches to Frame Analysis. The traditional inclusion/exclusion approach to the analysis of media frames may be limited by its failure to examine differences between frames beyond topical or thematic content. Several scholars have sought to remedy this by arguing for research into variations in aspects of frames that may play important role in the influence of media frames. Reese (2007) illustrates a methodological problem stemming from different interpretations of the appropriate unit of analysis in framing studies. Some scholars hold fast to the notion of frames as macro-scale constructs that promote the definition or solution for a specific problem. The nature of such work is to define the presence or absence of specific frames through an overall analysis of a story's language and other associated content.

An alternative methodological approach to framing focuses on the presence or absence of "object attributes" and the role they play in audiences' framing of an issue. In such studies, each reference to the subject is analyzed for the co-occurrence of specific words or phrases that label attributes of the subject. As Reese (2007) notes, "[t]he advantage in precisely locating the unit of analysis is traded off in restricted interpretative ability (p. 151)." The transfer of aspects or attributes of particular issues from media to audiences has also been addressed under the agenda-setting research paradigm (McCombs and Shaw, 1972; McCombs, Llamas, Lopez-Escobar, and Rey, 1997). Agenda-setting research focuses on the causal relationship the role the prominence of

media coverage an issue receives, and the quality and duration of exposure to coverage of that issue, lead to an increased perception in importance of that issue among the audience. McCombs and Ghanem (2001) presented a model for the convergence of framing and agenda-setting, an approach that has been supported by other scholars (Maher, 2001). The model categorized framing as the vehicle through which elements of the media agenda are transferred to the public agenda, incorporating not just the salience of various issues relative to each other, but also to cognitive and affective attributes manifested in the media frames (McCombs & Ghanem, 2001). While others have disagreed with the idea of converging the two theories on the grounds of the nature and persistence of the effects (e.g., Scheufele & Tewksbury, 2007), the continued evolution of theoretical models and methodological approaches under both paradigms offers insights into how news media influence audiences.

A two-dimensional approach to framing research was developed by Chyi and McCombs (2004), which focuses not on the presence of frames themselves, but aspects of coverage which each contribute to the way an issue is framed. The authors' identification of time and space as separate aspects which influence the way in which news stories are framed adds levels of depth and consistency to the study of media frames. One advantage of this method is that variables of tone and space and can be used for cross-issue comparisons of media framing. Secondly, the two measures can be used in tracking how these aspects of framing of a particular event or issue change over time.

While no cross-issue comparisons using a multi-dimensional typology have been published as of the writing of this paper, several studies have utilized a multi-dimensional typology to examine coverage of issues over time. Muschert & Carr (2006) examined the

changes in space and time framing in the *New York Times'* coverage of nine different

school shootings in a four-year time period. Bichard (2006) added two more dimensions

to the typology in her analysis of time, space, tone, and topic in the framing of

candidate's blog posts during the 2004 election. These studies exemplify the utility that a

widely-used framing typology would bring to the study of media framing.

   Framing Effects of Visual Communication.   While many scholars have argued

that visual content plays a key role in communication, the role of still and moving images

in the construction and transfer of frames is unclear. On face, photographic images and

video are less mediated representations of reality than text. Messaris (2000) pointed out

that selective representation is an inherent part of the image-making process, influencing

the viewer through the objects included and excluded in the visual representation. While

readers may notice specific textual cues that introduce bias into news stories, selective

representation is likely to go unnoticed by viewers. Messaris and Abraham argued that

this implicit nature of visual communication makes images highly effective for framing

ideological messages.

> In comparison with verbal language, then, visual propositions are more reliant on the viewer's ability to make intuitive sense of implicit meanings on the basis of contextual or other cues. Consequently, viewers may be less conscious of having been presented with a fully articulated set of claims than they would be if those claims had been made verbally. (2001, p. 219)

   A substantial proportion of research into media framing to date has involved the

coding of frames exclusively or predominantly through analysis of the textual or verbal

content of media. Evidence from other theoretical approaches to mass communication,

however, demonstrates a clear importance of the role of accompanying visual content in

ultimately shaping the effects on the reader. Studies of television images, newspaper and

magazine photographs, and online visual communication all have yielded evidence that visual content plays a key role in shaping audience perceptions.

Exemplification research has shown that by manipulating the presence and selection of images accompanying news stories, researchers can change users' perception of social issues. Photographs that emphasize one side presented in a balanced news story swayed readers in favor of that story (Zillmann, Gibson, & Sargent, 1999), while manipulating the demographics of individuals in disease related stories can alter reader's perception of their and others' risk (Gibson & Zillmann, 2000).

Political communication research also suggests that visual content should not be excluded from frame analysis. Multiple studies have found that the presentation of positive and negative aspects of campaign images can influence a viewer's evaluation of a candidate. (Moriarty & Garramone, 1986; Rosenberg & McCafferty, 1987; Moriarty & Popovich, 1991). Graber (1988) found that news pictures played several central roles in viewers' evaluation of presidential candidates by contributing to the credibility of the subject, the subjects' ability to hold the viewers' attention, stir emotions, and produce positive/negative feelings.   Verser and Wicks (2006) used three key clusters of factors in their evaluations of presidential candidates' portrayal on their websites: non-verbal and body language cues of the subject; the setting, time and positioning of the subject with family members, and the production values of the photograph.

Several recent studies have incorporated visual content in their operationalization of frames, albeit quite differently. Bichard (2006) included images of candidates on their Web sites in determining how tone was framed in a series of blog posts.   Ceding a greater role to pictures, Schwalbe (2006) used "dominant images" from Web site home

pages as a proxy for how websites framed the U.S.'s invasion of Iraq in 2003. In an experimental study, Coleman and Banning (2006) found support for their hypothesis that non-verbal cues function as an "affective framing" component in user evaluations of presidential candidate debates.   While their study focused more on framing attributes than frames as a measure, the evidence of significant effects based on variations in images suggests that images be heavily weighted in content analyses of media with visual components.

Frame Analysis of U.S. Military Conflicts. Because framing theory and its application to the study mass communication are only two decades old, the earliest framing studies involving coverage of U.S. military operations only date back to the Persian Gulf War of 1991. Comparisons between studies are made difficult due to the use of different coding schemes and methods. However, several trends were common to coverage of both the Persian Gulf and Iraq Wars, across different media types and outlets. Analysis of television news coverage of the Persian Gulf War in 1991 found that television news coverage was both supportive of and reliant on U.S. officials and their statements (Reese & Buckalew, 1994; Iyengar & Simon, 1995). The role of images in the coverage of war and terrorism has often been slanted toward conveying a particular frame. In analyzing news magazine photographs during the Gulf War, Griffin and Lee (1995) found that very few photographs showed destruction, and that more photographs depicted American weapons and vehicles in non-combat situations than in combat.

The research published to date on the framing of the Iraq War has focused on the first five weeks of the conflict, from the date of the U.S. invasion of Iraq on March 20, 2003 to May 1, 2003, when President George W. Bush announced that "major combat

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operations in Iraq have ended." These studies have mainly focused on one or two major

news outlets (Dimitrova & Connolly-Ahearn, 2007; Edy & Meirick, 2007; Dimitrova,

2006). Dimitrova (2006) found that the *New York Times'* coverage of these five weeks

relied heavily on coverage of military operations and the destruction caused by the war.

Dimitrova & Connolly-Ahearn found that this coverage differed slightly from Arab-

language media coverage, which uniformly framed the conflict in terms of the violence of

war, but featured substantially more human interest coverage (2006).

Several studies have looked explicitly at visual coverage of the Iraq War.

Schwalbe (2006) found that photos of the war depicted on 26 major news websites hewed

to similar trends during the five initial weeks of conflict. While images during the first

week of war focused heavily on what she termed "the official war machine" (ordnance,

civilian and military leaders, Baghdad air strikes, and destruction), in each of the

subsequent weeks the emphasis shifted more toward depicting "the personal face of war"

(troops, journalists, civilians, humanitarian relief, protestors, and the home front).

Another study found that broadcast coverage of the toppling of a statue of Saddam

Hussein in Baghdad were central in the construction of a "victory" frame that shifted

coverage away from ongoing fighting in other regions of the country (Aday, Cluverius, &

Livingston, 2005).

Content analyses of Web news have been less prevalent than those of print and

broadcast news, likely a function of both the relative newness of the Web and the

methodological difficulties of capturing and coding online content. The Project for

Excellence in Journalism' annual State of the News Media study has been including

online content since 2004, information about news stories is treated solely as text, and

stories are coded with regard to presence of audio, video, photos or graphics (PEJ, 2004).

Schultz's (1999) content analysis of online newspaper sites analyzed the presence of

interactive elements of the Web sites themselves, which included email contacts for

writers and editors, discussion forums, and online publishing of letters to the editor.

One descriptive content analysis has looked broadly at the use of online features

in Web sites' coverage the initial Iraq invasion. Dmitrova & Neznanski captured the

homepages coverage of ten international Web sites during the five weeks of the invasion,

and coded for the presence of pictures (74.6% of homepages), audio (10.6%) and video

(16.7%) content, and interactive elements such as chat rooms and polls (26%). The

authors speculated that costs and training difficulties in multimedia content were

responsible for the lack of multimedia coverage, but expressed optimism that emerging

platforms would add a dimension to coverage of the ongoing conflict:

> Especially for international events that take place in remote locations, the benefits of
> more involved news presentation are many. For example, interactive maps can be used to
> show readers where and how events are taking place; multimedia slide shows can provide
> background information about the parties involved; and video can convey the urgency of
> real-time reports. Online users may soon expect to see such features present on a regular
> basis (Dimitrova & Neznanski, 2006, ¶46).

Online Multimedia and Media Effects. Very little research to date has

investigated media effects of online multimedia platforms, and few if any studies have

analyzed multimedia coverage of a news topic. Sundar's (2000) study of multimedia

content and advertising tested the effects of five modalities of content (text only; text and

picture; text and audio; text, picture, and audio; and text, picture, audio and video) on

viewers' recall of the news and advertising information therein. Sundar's findings

proved consistent with earlier research demonstrating the cognitive superiority of textual

presentations in comparison with audio and audio-visual content. Recall and recognition of news content were the highest for the text-picture story condition, followed by the text-only condition. Conversely, however, the two audio-visual conditions led to the highest recall and recognition of advertising content.   Sundar considered (and dismissed) the influence of a novelty effect in users' evaluation of audio-visual content in what was, at the time, a predominantly text-only medium. Changes in Web content, bandwidth, and audiences in the years since Sundar conducted his experiment warrant a reconsideration of his findings.

A second study which focused on a comparison multimedia content with text content found conflicting results.   The Poynter Institute's Eyetrack III Study, which used several experiments to evaluate the effectiveness of text content vs. multimedia content on recall, found that multimedia stories produced a slightly lower overall recall rate, but an increased recall rate for information related to new unfamiliar procedures, processes and vocabulary related to the processes (Outing & Ruel, 2004).

Studies focusing on customization of Web portals have found that perceived interactivity of a portal influences the degree to which users feel in control of the content they are seeing, which in turn leads to more positive evaluations of the content (Sundar, Kalyanaraman, & Brown, 2003; Kalyanaraman & Sundar, 2006). Navigation schema within multimedia slideshows allow users varying levels of interaction, ranging from stories that play through start-to-finish to stories where users select each image individually from a gallery of thumbnail images that functions like a table of contents. An increase in user control over the order and rate in which images are presented may influence positive evaluations of the content.

Analyzing Multimedia Journalism. To date, no analyses have been published

regarding the prevalence of multimedia use by online news outlets, doubtless hindered by

the rapid rate at which Web sites are adopting new multimedia technologies and utilizing

them to new ends. This study will provide an exploration of the use of multimedia

platforms in the delivery of news online, and an analysis of the elements of multimedia

news stories that contribute to framing the issues being covered. By analyzing the

subjects depicted and quoted in multimedia stories in relation to the overall framing of

the ongoing conflict, the study may provide valuable information for future theoretical

and methodological approaches for future analyses of multimedia content.

Modern definitions of multimedia are still far from cohesive, though several

trends emerge. Sundar (2000) described the use of multimedia by online news Web sites

as extending from "pictures, graphics, and maps to audio downloads of news

stories…[and] video downloads of important news events (p. 480)." In his instructional

book on creating multimedia content, Tay Vaughan defines multimedia as "woven

combinations of digitally manipulated text, photographs, graphic art, sounds, animation

and video elements (p. 1)." In order to narrow the scope of multimedia technologies to

those used in news, Deuze (2004) proposed a definition specific to multimedia

journalism:

> The presentation of a news story package on a website using two or more media formats, such as (but not limited to) spoken and written word, music, moving and still images, graphic animations, including interactive and hypertextual elements
>
> The integrated (though not necessarily simultaneous) presentation of a news story package through different media, such as (but not limited to) a website, a Usenet newsgroup, email, SMS, MMS, radio television, teletext, print newspapers and magazines.

Deuze's definitions underscore that multimedia has appropriate uses that vary based on the type of subject they modify. "Multimedia reporting" can be interpreted as reporting for two separate media forms (i.e., television and radio), or as reporting for the Web using platforms that allow for the synthesis of multiple media forms. "Multimedia content," however, implies content delivered via one platform that, in itself, integrates the presence of multiple media formats.

An element of Deuze's first definition that may play an important role in online multimedia news is that of interactivity. Communication scholars that content that is interactive may lead to an increase in viewer attention, viewer satisfaction with the content, and as a result, increased cognition during viewing of the news story. Two interpretations of interactivity have predominated in mass communication literature: a process-oriented approach (Rafaeli, 1988) focuses on the transmission of a message between multiple senders. Other scholars have favored defining interactivity as a construct comprising several dimensions: direction of communication, user control, and time (McMillan & Hwang, 2002); control, responsiveness, and interaction efficacy (Sohn & Lee, 2005).

The inconsistencies of the above definitions of multimedia, along with the emphasis of the proposed research on news content in particular, requires the synthesis a working definition of multimedia news content: *Integrated textual, visual, and audio news content that permits non-linear navigation.* Several key words in this definition bear explication of their own. *Integrated* refers to a number of technological platforms that allow the presentation of audio –visual content as part of one file; these include Flash movie and video files, but also series of linked HTML pages. These platforms allow for

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the presentation of uninterrupted, unsegmented multimedia content. *Non-linear* refers to content that utilizes neither a top-to-bottom textual organization schematic (as in print news) nor a start-finish chronological schematic (as in broadcast news). *Navigation* is the ability of user to traverse content via hyperlink.

At the present time in their utilization, multimedia platforms may be employed by newsrooms for particular types of stories based on the amount of time involved in planning and production. Specifically, these formats are more likely to be used for non-breaking stories with a deeper level of content. The development of multi-linear Flash presentations and interactive graphics is a process that requires extensive planning before the reporting takes place, and production after the reporting takes place. The time-intensive nature of this process necessitates that these two multimedia platforms are seldom used in the coverage of breaking news, which in turn influences the type of content that appears in these formats. Multimedia platforms have often been used for in-depth or investigative coverage, which may be aided rather than hindered by an extended time period. Image slideshows (with or without audio) may be seen as exceptions to the rule, as their production has been aided by the development of Soundslides and other templates that may be re-used for many separate stories.

Research Questions

The differences involved between the production of these multimedia forms and traditional text-and-image reporting warrant the analysis of how multimedia frames the news. As more online newspapers utilize multimedia to various ends, and more resources are applied to the production of multimedia content, and audiences continue to shift to accessing their newspapers online, the news content that newspapers produce becomes less linear, and less text-oriented. These changes necessitate new approaches to the study of media frames.

As the predominant political issue in the U.S. from March 2004 through October 2007 time span (Gallup Org., 2007), the Iraq War was the topic of substantial multimedia coverage by newspapers, and provides enough material for this exploratory analysis of multimedia framing. Because of the time-intensive nature of multimedia production, as well as the ability to provide longer quotes from sources or subjects, it can be reasonably inferred that multimedia coverage of the war will tend toward "human interest" stories rather than other typical war frames.

RQ1: How did online newspaper Web sites use multimedia forms in coverage of the Iraq War?
H1a: Papers with a smaller Web audience will have fewer multimedia stories covering the Iraq War.

H1b: Multimedia coverage from papers with a smaller Web audience will focus more on human interest stories than coverage from papers with a larger Web audience.

RQ2: What frames were used in multimedia coverage of the Iraq War in 2007?
H2a: Human interest stories will predominate multimedia coverage of the Iraq War.

H2b: Audio slideshows and photo galleries will utilize a human interest frame more frequently than other multimedia story types.

While a tendency toward in-depth reporting is one facet of multimedia news content, another is the diminished explicit voice of the reporter. The ability of the user to choose their own navigation through a story allows the use of longer interview segments (audio or video) than are typically used in television or radio broadcasts; in the case of multimedia, the user themselves can choose to stop listening to a particular interview clip, or use an interactive slider to move past the interview clip to a subsequent linear portion of the story.

RQ3: How, if at all, did multimedia stories address the controversies over the U.S.'s ongoing presence in Iraq?

Visual elements of a story may not necessarily present the same thematic messages as the text. The proposed study of content that includes visual and textual information will be strengthened by the analysis of visual and textual elements separately prior to the coding of potential overall frames. While multimedia stories necessitate visual content, the presence of appropriate visuals to match the story narrative is based on a number of factors, such as the news agency's ability to send a photographer to a remote location, or the ability and willingness of the subject's availability of photos. Because visual content plays an important role in users' perception of news content, and a variety of visuals that may be used to accompany a particular story frame, it is important to

specifically analyze which images are used to accompany particular frames in the

coverage of a news event.

RQ 4: How does the visual content in each multimedia story relate to the textual frames presented?

Method

In order to identify the study population of multimedia content dealing with the Iraq War, a primary analysis of the 100 most-popular online newspaper Web sites was conducted with the objective of identifying and locating multimedia content related to Iraq. The sites for inclusion were determined via the use Nielsen NetRatings data on online newspaper Web sites, which ranks the sites by the number of unique visitors over the course of a month (Nielsen NetRatings, 2006; see Appendix). The 100 sites identified were then the subjects of a primary analysis to determine their use and organization of multimedia content.

An operational definition of multimedia is needed in order to determine the content for inclusion of the study.   Four widely used content platforms will be considered for inclusion in this study.

Photo galleries/slideshows: Many news outlets have utilized this format for presenting photographic images and captions that do not have an accompanying text stories. These are often presented as a string of separate HTML pages (one image per page) that maybe viewed in a pre-set order by using Next/Previous navigation, or out of sequence by clicking on buttons with the corresponding number of the picture.

Audio slideshows: An alternate image slideshow format involves the use audio that plays during the display of the images. This is either accomplished via one constant audio track that plays through from start to finish, or separate audio tracks for each photo in slideshow. The development of Soundslides, a software program that offers easy

integration of audio and slides, has led to a proliferation in image-audio slideshows since 2005.

Interactive graphics: These features are interactive versions of info graphics. Usually used to convey visual diagrams, interactive graphics allow users to navigate through different perspectives, and click on a particular area of the graphic to receive further image, text, audio, or video information about the specific content there depicted.

Interactive package: Often labeled as "special report" or "interactive feature," these stories provide a comprehensive structure for integrating any one or more of the above media forms, standalone video, text, audio, and animations. Unlike the other formats, interactive packages often comprise several different narratives that may be thematically related. Interactive packages usually feature a menu or navigation bar included in the story, which allows the user to select which segments to view, and in what order. These presentations often add value to the individual components by incorporating meaning to the navigation, such use of a map to locate five clickable stories about towns in a geographical region.

Two types of content that have been operationalized as multimedia in previous research were deliberately excluded from this study: audio-only stories and video-only stories. The reliance of such stories on a single linear structure and one media platform places them outside the study's definition of multimedia news content.

Content from wire services posed an additional degree of difficulty in coding. As the use of non-text reporting and online exclusive content has grown on the Web, wire services have expanded to provide more image, video, and even multimedia content. Such content presented difficulties in avoiding duplication across multiple media sources,

and usually took one of two forms. These were either a multimedia story created by a wire services and distributed to media outlets, or content (usually photos and captions) that was distributed to media outlets and subsequently presented as part of a multimedia story. The former, when identified, were excluded from the sample. However, photo galleries that were produced by newspaper staff and posted as newspaper content were included, even if some of the photographs were attributed to a wire service.

The necessity of including visual and textual content in analyzing the framing of issues in media coverage calls for a multi-dimensional approach to framing. Since the visual content may contain reinforcing, unreinforcing, or separate messages from the text, these two elements were coded separately from each other, and separate overall visual and textual topic frames were determined for each story in the sample.

Sample. The primary obstacle to identifying the population of news content for this study was the high level of variance in organization and search schema employed by the Web sites selected for inclusion. Most online newspapers group multimedia news content into its own section, or page, of the Web site. However, unlike thematic sections, which usually rely on universal titles such as "sports" or "local," naming conventions for multimedia sections are inconsistent across multiple newspaper sites, and content is often divided into several smaller sections. The *Rocky Mountain News*, for example, groups all its multimedia content under a heading of "Web Exclusives," which can be accessed as a section from the site's homepage, or through separate pages for different platforms of multimedia stories. In comparison, *New York Times* groups all its multimedia content in a searchable "Multimedia" section, and several other newspapers have separate headings for one or multiple sections titled "special reports" (some of which are multimedia

stories), "photo galleries," "photos and video," etc. Because the goal of the study was to analyze multimedia news coverage on all of the 100 most-visited sites, these variations made the adoption of one single method for capturing this content imprudent and impractical.

In order to ensure that all relevant multimedia content is captured in the sample, a multi-step process was undertaken to search each newspaper Web site. First, the homepage site navigation was searched for sections matching any of the following terms: "Multimedia," "Web exclusives," "Special Reports," "Photos and Video," or "Interactive." Any sections matching the above headings will be included in the analysis, and the navigation provided on those section homepage will be scanned for links to additional sections that may have been excluded from the homepage navigation. If the site does not contain navigational sections with any of the above headings, they will be entered into the site search engine as keywords.

Once all the sections containing multimedia content have been identified, the labels of the content were searched to indentify content relevant to the study. The keywords used to identify relevant content were "Iraq," "soldier," "war," and "funeral." These were entered intoa site search engine if section-specific searches are available, or entered into the Web browser's text-search function. Resulting stories were added to the study database, including the story title or tag name, the name of the newspaper, and a direct hyperlink to the story.

Coding. Riffe, Lacy and Fico (2005) identified the key problem involved in the coding of media content that combines multiple forms: potential inconsistency in message between the different news media forms. While meaning may be easily coded

separately for each media form, a single categorization of meaning may be impossible, and necessarily inaccurate. This study addressed consistency across different multimedia platforms (audio slideshows, photo galleries, interactive graphics, and flash presentations) by coding each story's visual and textual content on a detailed level, and using a summative approach to the coding of story meaning into specific fames.

The study unit for the purpose of this analysis was the individual multimedia story, as operationalized by the four story types above. Stories were accessed online via two means: multimedia sections of newspaper Web sites, and site-specific search results pages on newspaper Web sites. Stories were identified via the ability to access the piece via a single link naming the story, either from the Web site's multimedia section or search results page. Thematic inclusion criteria for study units were the implicit or explicit mention of Iraq War, U.S. military soldiers, Iraq, in the story's title or description. The total number of stories for inclusion was determined via the primary analysis of newspaper Web sites, which yielded 204 multimedia stories. Three stories were later unable to be located, and thus were not included in the coding, leaving the sample size at 201.

Content selected for inclusion was coded by a coder trained in the content protocol. A subsample of 68 stories (33.8%) of the content was coded by a second coder, and each variable was evaluated for intercoder reliability using Scott's pi. The size of the subsample was determined using the formula determined by Riffe, et al (2005) to yield a sufficient subsample for a 95 percent confidence interval. Both coders were mass communication graduate students with experience in visual communication and media production.

Textual and image content from each multimedia story was analyzed, as well as overall thematic framing for the entire story. Several coding categories were incorporated into the study. These include *story type* (image slideshow, image-audio slideshow, interactive graphic, or Flash presentation); *main subject* (U.S. military personnel, Family of U.S. military personnel, Anti-war protestors, Iraqi civilians, U.S. politicians); *mention of extended tours for U.S. soldiers* (yes, no); *war purposes mentioned* (anti-terrorism, anti-weapons of mass destruction, Iraqi liberation from Saddam Hussein, other); *sources quoted* (U.S. soldiers, U.S. military leaders, U.S. politicians, Iraqi civilians, Iraqi soldiers, Iraqi politicians, family members of U.S. soldiers, non-U.S. military personnel); *subjects depicted* (same categories as above); *explicit blame for duration of war* (U.S. military, U.S. politicians, Iraqi resistance).

Coders also coded a second set of variables following viewing the story. These variables will consist of *dominant visual frame* (military conflict, violence of war, human interest, rebuilding of Iraq, responsibility [Adapted from Dimitrova & Conolly-Ahearn, 2007]); *dominant textual frame* (see above categories), as well as the *time* (present, past, future) and *space* (individual, community, regional, national, or societal). Coders had the option of coding "other" frames for stories which can not be classified using the typology above.

The Scott's pi values for the main story variables were as follows: story type (.92), dominant textual frame (.82), dominant visual frame (.72), subject of human interest stories (.77), time (.68) and space (.66). The values for all other variables were at or above .80, with the exception of four binary variables with a lopsided distribution whose coefficient was skewed by one or two cases of coder disagreement. For a

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complete list of agreement and reliability coefficients, please see Appendix 3.2. While

the values for the time and space categories were lower than would be accepted for a

published study, due to the exploratory nature of the study and the content being

analyzed, and the substantially higher agreement values (90 % for time, 78% for space),

the values were included in the Results section below.

Results

The sampling method yielded a total of 201 multimedia stories which were analyzed for this study. This included 120 photo galleries, 53 audio slideshows, 20 interactive packages, 4 interactive graphics, and 4 text-video stories. Three additional multimedia stories were located and selected for inclusion but were no longer available online for collection and coding. The predominant framing dimensions utilized in the sample were a *human interest* textual frame, an *individual soldier-focused* visual frame, a *present* time frame, and an *individual* space frame. The results across these dimensions show that in 2007, multimedia stories primarily depicted the Iraq war through present-day profiles of individual soldiers.

Figure 1: Overall distribution of Multimedia Stories in the Sample
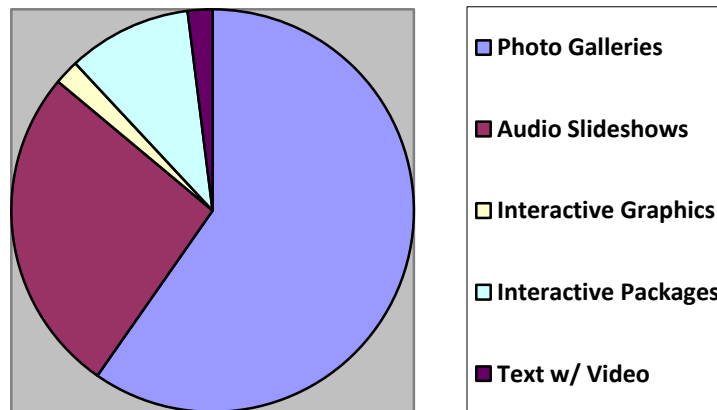
Distribution by online readership.   The use of multimedia stories in coverage of the

Iraq War by U.S. newspaper Web sites did not consistently vary relative to size of online

readership. While the two most read newspaper sites, *Nytimes.com* (35 multimedia

stories) and *washingtonpost.com* (26 stories), each contributed a large share of the study

sample, the pattern did not hold with subsequent newspapers. The next largest number of

stories in the sample was 10, which was shared by the Rocky Mountain News (53rd in

online readership) and the El Paso Times (97th in online readership). Several small

newspapers each contributed a number of stories, in particular photo galleries. For a full

table of online readership data and multimedia story distribution, please see Appendix

3.1.

A categorical examination of the number of Iraq War multimedia stories by

circulation size lends overall support to Hypothesis 1a. Newspapers with online

readerships of 1,000,000 or more unique visitors per month, which constituted the 34

most-visited Web sites in the sample, averaged 3.21 multimedia stories on the Iraq War

in 2007. Newspapers whose online readerships ranged between 500,000 and 999,999

averaged 1.79 multimedia stories, and those with fewer than 500,000 visitors averaged

1.10 stories.

Distribution of frames.   As shown below, these stories addressed all the expected

varieties of war frame, but human interest stories were predominant in the population

(χ^2=32.25) supporting hypothesis 2a (see Table 1). Seventy-two percent of stories in the

sample involved human interest stories. The next most frequent categories were military

conflict and violence of war, each of which represented 7.5 percent of the sample. A

rebuilding Iraq frame was used in 4 percent of stories, a responsibility frame in 4.5

percent of the stories, and the remaining 4.5% could not be classified into one of the five

frames.

Hypothesis 2b predicted that audio slideshows and photo galleries would more

frequently rely on human interest framing than the other multimedia story types. The

reliance on human interest frames permeated all categories of online readership, lending

only weak support to this hypothesis. Within story types, photo galleries utilized a

human interest frame less often than did audio slideshows or interactive packages. The

other two story types each only represented 2% of the sample each. A human interest

frame was most often used in interactive packages (85%), followed by audio slideshows

(79.2%) and photo galleries (69.2%). In addition, a human interest frame was utilized in

one of the four interactive graphics, and two of the four text/video stories.

Table 1: Textual Framing by Story Type

<u>Dominant Textual Frame</u>			<u>Multimedia Story Type</u>			
	Photo Gallery	**Audio Slideshow**	**Interactive Graphic**	**Interactive Package**	**Text w/ Embedded Video**	**TOTALS**
Military Conflict	9 (7.5%)	3 (5.7%)	0	1 (5%)	2 (50%)	15 (7.5%)
Violence of War	10 (8.3%)	2 (3.7%)	2 (50%)	1 (5%)	0	15 (7.5%)
Human Interest	83 (69.1%)	42 (79.2%)	1 (25%)	17 (85%)	2 (50%)	145 (72.1%)
Rebuilding of Iraq	5 (4.2%)	3 (5.7%)	0	0	0	8 (4.0%)
Responsibility	7 (5.8%)	2 (3.8%)	0	0	0	9(4.5%)
Other	6 (5%)	1 (1.9%)	1 (25%)	1 (5%)	0	9 (4.5%)
TOTALS	**120**	**53**	**4**	**20**	**4**	**201**

$\chi^2(20, N = 201) = 32.25, p < .05.$

Hypothesis 1b predicted that papers with a smaller audience would be more likely to use multimedia story types for human interest coverage than larger papers. As shown in the Table 2, this was not the case. The widespread use of human interest frames permeated newspaper Web sites of all circulations. The principal outliers were the two papers with the largest readerships and the most multimedia stories. The *New York Times* utilized a human interest frame in 16 of 35 stories (45.7%), and the Washington Post utilized a human interest frame in 14 of 26 stories (53.8%).

Table 2: Multimedia Stories and Dominant Textual Frames by Online Readership

	Online Readership per month		
	1 million +	.5 to .99 million	Less than .5 million
No. of publications	34	28	38
Stories per publication	3.21	1.79	1.10

	Percentage of Stories Utilizing Frame		
Dominant Text Frame	**1 million +**	**.5 to .99 million**	**Less than .5 million**
Military Conflict	11.9%	2.0%	2.3%
Violence of War	11.9%	4.1%	0
Human Interest	59.6%	85.7%	88.4%
Rebuilding of Iraq	5.5%	4.1%	0
Responsibility	4.6%	4.1%	4.7%
Other	6.4%	0	4.7%

The dominant visual frames utilized in the multimedia coverage were similarly weighted toward human interest coverage (Table 3). The most frequently employed visual frame was a civilian human interest frame (36.8%), in which images of non-soldiers served as the predominant visuals for a story. The next three most prevalent frames focused on soldiers: a military conflict downtime frame (28%), a soldier-after-war human interest frame (19.4%), and a soldier before-or-during-war human interest frame (18.9%). Visual frames emphasizing combat and violence were utilized sparingly,

including military conflict combat (4%), violence to property (10%), and corporeal violence (3.5%).

Table 3: Visual Framing by Story Type

Visual Frame:	Multimedia Story Type:					
	Photo Gallery/ Slideshow	Audio Slideshow	Interactive Graphic	Interactive Package	Text w/ Embedded Video	Total
Military Conflict -- Combat	4 (3.3%)	3 (5.7%)	0	0	1 (25%)	8 (4%)
Military Conflict -- Downtime	8 (6.7%)	6 (11.3%)	0	0	0	14 (28%)
Violence -- Property	5 (4.2%)	0	0	0	0	5 (10%)
Violence – Corporeal	4 (3.3%)	2 (3.8%)	1 (25%)	0	0	7 (3.5%)
HI – Soldier Before or During War	21 (17.5%)	6 (11.3%)	0	9 (45%)	2 (50%)	38 (18.9%)
HI – Soldier After War	18 (15%)	15 (28.3%)	0	5 (25%)	1 (25%)	39 (19.4%)
HI – Other Military Personnel	0	1 (1.9%)	0	0	0	1 (0.5%)
HI – Civilian	51 (42.5%)	18 (34%)	0	5 (25%)	0	74 (36.8%)
Other	9 (7.5%)	2 (3.8%)	3 (75%)	1 (5%)	0	15 (7.5%)
TOTAL	120	53	4	20	4	201

χ^2(32, N = 201) = 62.5, p < .001

Content of human interest stories: Although a majority of the multimedia stories in the sample focused on the human stories related to the war, the topics addressed in these stories were diverse (see Table 4). The most frequent subject of the human interest-framed stories was the death of one or more soldiers in Iraq, which accounted for 30.1% of the human interest stories. The next most frequent subject dealt with soldiers returning home (14.4%), followed by medical care and recovery for soldiers injured in Iraq (11.6%). The remaining coded subjects were troop deployment (9.6%), combat in Iraq (6.2%), preparation/training for combat (6.2%), anti-war protest (2.1%), and government

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proceeding related to war (0.7%). In addition, 28 stories (19.6%) had subjects that did

not easily fit into the existing categories. The subjects of these stories were labeled using

open-ended coding, and can be found in Appendix 3.4.

Table 4: Main Subjects of Human Interest Stories

Subject	Number	%
Troop Deployment	14	9.6
Soldier visit home/return/family awaits visit	21	14.4
Soldier funeral/tribute to deceased soldiers	44	30.1
Combat in Iraq	9	6.2
Preparation /Training for Combat	9	6.2
Anti-War Protest	3	2.1
Government Proceeding Related to War	1	0.7
Injured/Ill soldiers and/or veterans' medical care	17	11.6
Other	28	19.2
	146	**100%**

Individuals Depicted and Quoted. Despite the multimedia nature of the stories,

individuals in the stories were much more often depicted visually than quoted through

text or audio. Nearly 80% of the stories in the sample depicted U.S. soldiers, and more

than half (52.7%) depicted a family member of U.S. soldiers (see Table 5). The next

most commonly depicted groups were U.S. civilians (36.8%) and Iraqi civilians (23.9%),

followed by Iraqi soldiers (7.5%), U.S. national politicians (7%), Iraqi politicians (5%),

other nationals (3.5%), and U.S. local politicians (1.0%).

The figures on source quotation followed a largely similar pattern, but were

substantially lower. U.S. soldiers were quoted in 27.9% of the stories, again followed by

family members of U.S. soldiers (20.4%). The numbers for the other categories were

U.S. civilians (8.5%), U.S. national politicians (4.5%), Iraqi civilians (3.5%). No other

group was depicted in more than 1.5% of the sample.

Table 5: Individuals Depicted and Quoted in Stories

	Depicted in Story		Quoted in Story	
	Number	**%**	**Number**	**%**
U.S. Soldiers	160	79.6	56	27.9
Families of U.S. Soldiers	106	52.7	41	20.4
U.S. National Politicians	14	7.0	9	4.5
U.S. Local Politicians	2	1.0	0	--
U.S. Civilians, Other	74	36.8	17	8.5
Iraqi Soldiers	15	7.5	3	1.5
Iraqi Politicians	10	5.0	3	1.5
Iraqi Civilians	48	23.9	7	3.5
Other Nationals	7	3.5	2	1.0

Controversies Related to War: With the predominant focus on human interest stories,

there were few mentions of thematic elements related to the nature of the war as a whole.

Specific mention of the purpose or objective for the war was only made in 5 (2.5%) of the

stories. More frequent was reference to extended or repeated deployments for U.S.

soldiers (9% of the stories). Only two stories mentioned a particular cause as being to

blame for the duration of the war, with one story blaming the U.S. government and the

other attributing blame to Iraqi political leaders.

Attribution of Thematic Concerns and Controversies Regarding the War: Only

two stories (1%) in the sample included references to blame for the duration of the war.

Of the two stories that included references to blame for the duration of war, both utilized

audio subject quotes express the opinion (one subject blaming the U.S. government, one

blaming a combination of U.S. and Iraqi policymakers).   In each of the four stories

which included reference to the purpose of the war, the information was always presented

via an audio direct subject quote (3 times by a soldier, once by a family member). Nine

percent of the stories made reference to U.S. military personnel having their tours of duty

extended or repeated.

Table 6: Mention of Thematic Concerns and Controversies

	Number	%
Mention of War Purpose/Objective	4	2.0
Blame for Duration	2	1.0
Mention of Extended or Repeated Tours of Duty	18	9.0

Interaction between textual and visual frames: There was a strong degree of

consistency between the dominant textual frames and visual frames in the stories (Table

7). Out of the 145 stories that used a human interest text frame, all but 8 stories utilized a

dominant visual frame that focused on depicting individuals. Thirty-five of these stories

focused on depicting soldiers before or during the war, 38 focused on depicting soldiers

after the war, and 61 focused on depicting civilians.

Likewise, the stories framing the war in terms of military conflict were visually

focused on images of military personnel and equipment, either during combat (46.6%) or

downtime (40%).   Stories with a dominant textual frame of the violence of war primarily

visually focused on images of the killed and injured (40%) or destruction of property

(33%).   Stories which relied on a responsibility textual frame relied primarily on visual

depictions of civilians and civilian life (77.8%).

Table 7: Visual Frames By Textual Frame

	Textual Frames						
	Military Conflict	Violence of War	Human Interest	Rebuilding of Iraq	Respon-sibility	Other	Totals
Visual Frames							
Conflict – combat	7	--	1	--	--	--	8
Conflict – downtime	6	--	6	2	--	--	14
Violence – property	--	5	--	--	--	--	5
Violence – corporeal	--	6	--	--	--	--	6
Human Int. – soldier before war	1	1	35	--	--	2	39
Human Int. – soldier/vet after war	1	--	38	--	--	--	39
Human Int. – other military personnel or vet of previous war	--	--	1	--	--	--	1
Human Int. -- civilian	--	1	61	3	7	2	74
Other	0	2	3	3	2	5	15
	15	15	145	8	9	9	201

$\chi^2(40, N = 201) = 325.0, p < .001$

Time and Space: The final comparison explored how framing dimensions of time and space were utilized differently across multimedia story type. The results are presented below in Table 8. The findings suggest that of the most frequently utilized story platforms, photo galleries were highly likely to be used to utilize a present time frame, consistent with their greater use for news-oriented rather than feature-type stories. At the other end of the time frame spectrum were interactive packages, 65% of which focused on a past-framed story.

Table 8 : Time and Space by Story Type

	Photo Gallery/ Slideshow	Audio Slideshow	Multimedia Story Type: Interactive Graphic	Interactive Package	Text w/ Embedded Video	Totals
Time:						
Past	9 (7.5%)	9 (17%)	1 (25%)	13 (65%)	3 (75%)	35 (17.4%)
Present	111 (92.5%)	44 (83%)	3 (75%)	7 (35%)	1 (25%)	166 (82.6%)
Future	0	0	0	0	0	0
Space:						
Individual	31 (25.8%)	34 (64.2%)	0	11 (55%)	2 (50%)	78 (38.8%)
Community	58 (48.3%)	13 (24.5%)	0	2 (10%)	2 (50%)	75 (37.3%)
Regional	6 (5%)	0	0	5 (25%)	0	11 (5.5%)
National	18 (15%)	5 (9.4%)	3 (75%)	1 (5%)	0	27 (13.4%)
World	7 (5.8%)	1 (1.9%)	1 (25%)	1 (5%)	0	10 (5%)
Totals	**120**	**53**	**4**	**20**	**4**	**201**

Space: $\chi^2(16, N = 201) = 64.6, p < .001$
Time: $\chi^2(4, N = 201) = 49.4, p < .001$

With regard to space framing, there existed a strong discrepancy in how the two largest multimedia story categories framed the subject space of the story. Photo galleries were much more frequently utilized for community-framed stories than for individual-framed stories, whereas those categories were reversed for audio slideshows. Overall, 76% of the multimedia stories relied on individual (39%) or community (37%) framing, with a national frame (either pertaining to the U.S. or Iraq) the third most-frequent at 13%.

Discussion

The results of this study show that multimedia news stories played a specific role in depicting the ongoing Iraq War in 2007 by primarily focusing on the personal stories of U.S. soldiers and their families. Nearly three-quarters of the stories published relied on a human interest frame to cover the war, meaning that they profiled individual subjects rather than covering a particular news event. The stories as a whole relied very heavily on visual depictions of and quotes from U.S. soldiers, as could have been expected, but over than 52% of the stories also featured family members. The emphasis on the stories of American participants was at the expense of emphasis on the war's goals and progress toward them, or the stories of the Iraqi civilians and participants in the country's rebuilding effort.

The study also provides a snapshot at how multimedia story platforms are being utilized by online newspapers. At a time in which what constitutes Internet news content is being continually refined and redefined, we can see that U.S. newspapers are utilizing Web-specific technologies online to supplement the text and static-image content that is adapted from their print newspaper. The use of the Iraq War as an ongoing, national story allows us to draw inferences about the role of multimedia in covering national stories by newspapers with audiences of various sizes. The proportional distribution of the various types of multimedia stories provides a current perspective on how the technologies are being utilized.

How Multimedia Coverage Framed the Ongoing War. In comparison to prior studies of U.S. and coalition media coverage of the Iraq War, the stories in this study bore less of a reliance on government sources, and a much decreased use of military conflict and rebuilding of Iraq framing than multiple samples of print war coverage (Dimitrova & Connolly-Ahearn, 2007; Dimitrova & Neznanski, 2006). Certainly some of the differences can be attributed to the differences in story format, and newsroom decisions in the application of multimedia technologies to particular stories. While interviews for a print story may cheaply be conducted from afar through telephone or Internet means, cost considerations involved with gathering audio and images for multimedia would seem to predispose newspapers to favor stateside stories. When military conflict takes place at a remote front, stateside stories would be limited to preparation for combat, soldiers deploying or returning, and the impact of soldiers' absences on those left behind at home. Another possible explanation for much of the difference between these findings and those of previous studies deal in the war coverage is the dates of the sample being studied, and a decrease in combat operations in the war over time.

The results in the areas of textual frames, visual frames, and individuals depicted and quoted indicate a strong reliance on episodic narratives rather than themes or issues concerning the war as a whole. While frames were not coded explicitly using a dichotomous episodic/thematic coding, the overwhelming emphasis on *present* time and *individual* space implies that the stories of individual war participants dominated this area of war coverage. In fact, thematic concerns such as the duration of the war and the utilization of atypically long or numerous deployments received very little coverage in

the multimedia news stories. The lack of mention of the purpose of the war, or of any reason for the duration of the war, is consistent with the distribution of the dominant narrative and visual frames: a focus of the on the stories of individual participants.

One type of multimedia story that occurred numerous times in the sample was a tribute to the soldiers that had died from a particular community, state, or region. In some cases, the story was limited to deaths in 2007, while others chose to date back to the start of the war. These stories had common elements: one or several still photos of the deceased soldier, mention of their full name, hometown, age, and rank, and often mention of surviving family. These were presented usually as interactive graphics or interactive packages, though one story was an atypically long 17-minute audio slideshow that featured a reported reading the biographical information of the deceased. These stories occasionally proved difficult to categorize with regard to subject space, because of their focus on a number of discrete individuals that shared a common geographical region. This difficulty in choosing whether to code these as *individual* or *community* stories has a parallel in Iyengar's (1991) thematic/episodic typology also – by highlighting the number of soldiers killed from a region, and the time span during which soldiers have died in Iraq, these stories hint at the scope of the lives lost and affected by the war, even without the use of statistics or timelines.

Death and injury were prevalent in the human interest stories, despite little thematic mention of injury and mortality rates. The death of one or multiple soldiers was the most common subject of the human-interest framed stories (30.1%), followed by ill or injured Iraq War veterans and their medical care (11.6%). In addition to the human interest stories, 15 news stories, or 7.5% of the total sample, utilized   The visual nature

of all of the multimedia story types addressed in the study makes them conducive for expressing the physical devastation of injuries as well as the grueling nature of rehab. Platforms with audio that allow first-person narration from injured soldiers and family members can portray the emotional toll of injuries and illness more vividly than stories that rely on text.

The findings of this study with regard to coverage of the Iraq War in 2007 may not genreralize well to other wars, or even early coverage of the Iraq War. Iraq War coverage in 2007 is likely not reflective of the online news coverage this was has received since its inception in March 2003. While the year 2007 was chosen to paint an accurate portrait of contemporary use of multimedia in covering the war, many newspapers – particularly larger ones such as the *New York Times* or *Washington Post* – have utilized multimedia since the beginning of the war. The initial six-week invasion of Iraq was very military in nature, and involved combat against Iraqi national army forces in multiple regions of the country. This coverage was conducive to interactive graphics and features related directly to combat strategies and equipment.

Subsequent to the initial invasion, the nature of the conflict shifted toward peacekeeping, rebuilding, and anti-insurgency efforts. In comparison to combat, coverage of this type of military action is lacking in dramatic visuals, and also in "hard news" pegs that make a particular story timely. As a result of less ongoing combat, media coverage of physical violence or property destruction becomes less frequent. While the overall effort still results in military and civilian casualties, they are fewer and further between, meaning that stories covering casualties can allocate more time and space to profiling the injured or killed.

The descriptive, content-side data analyzed in this study do not provide information regarding how audiences processed the framing dimensions utilized in multimedia coverage of this war. However, previous research into the effect of particular frames on audience attitudes can inform inferences about how the framing of the war in multimedia coverage may influence audience outcomes.   Studies have found that frames used to cover of political issues can influence how individuals assign blame for problems, and accordingly, their level of support of various solutions to those problems (Iyengar, 1991). Framing of issues can also influence attitudes toward political issues as a whole, and perceived salience of those issues in the political discourse (i.e., Nelson Clawson, Oxley, 1997, Scheufele, Nisbet, & Ostman, 2005).

The Use of Multimedia Platforms to Cover and Frame News. Much of the research to date on Web content has failed to distinguish the elements that make this content unique from its offline precursors. While few differences may exist between a text story read on newsprint and a text story read on a computer screen, this research analyzed a body of stories published online by newspapers that could not have been published in their print counterparts. The fact that at least 201 multimedia stories were published in 2007 on the war, in the fifth calendar year of a slow-paced military operation is a testament to the volume of multimedia stories in use. Approximating the overall number of multimedia stories published by newspapers on all topics is impossible, due to lack of comparable databases to those that exist for print and broadcast coverage, and due to inconsistencies in how different Web sites publish, store, and allow access to their multimedia stories. However, this sample allows us to make several inferences about

multimedia news which future research and technological developments may allow to be borne out. Although this study does not give a complete picture of the use of multimedia by the most popular online newspapers in the U.S., it does show how multimedia were used in covering an ongoing, national news topic. By nature of the U.S.'s widespread military complex, focusing on the war also featured local angles for many of the papers in the sample, which organized their multimedia coverage around personnel from nearby military bases.

Because the locus of many stories was the homefront, the use of multimedia in covering the Iraq war was not that different from a standard, common use of the technology – to cover local human interest stories. In this way, the online photo gallery may serves as a higher-tech replacement for the standalone photograph and caption that occasionally dot newspaper front pages. In comparison with its print counterpart, the photo gallery permits the user a chance to view an unlimited number of photos. Newspapers which contributed photo galleries to this sample usually used templates that allowed the same navigation schema to be utilized for multiple photo galleries.

This study analyzed the use of multimedia categorically through the use of an operational definition that comprised five specific types of multimedia stories. The results of this analysis show some marked differences – at least in the area of coverage of the Iraq War – in the way these platforms are utilized. The support for the hypothesis that photo galleries and audio slideshows would dominate use of multimedia may result from time and cost factors involved in their production.

One aspect of multimedia coverage and framing that remains unclear is the relationship between some of the framing dimensions utilized and the multimedia story

types that utilized them. For example, the results show that photo galleries more frequently employed a community space frame, while audio slideshows more frequently employed an individual frame. However, this research cannot address whether this difference is the product of reporters choosing to capture and utilize audio when the story deals with a single person or few individuals as the subject. Or, in contrast, the process could be the result of the audio slideshow format, by its ability to only provide quotes from a few subjects in a limited time frame, dictating that a story focus on individuals rather than a community. These relationships may also be affected by the role the multimedia content plays vis-à-vis the newspapers' print content; many editors may view their multimedia content as a supplement to the print parent, and shape multimedia coverage accordingly.

The overall distribution of frames, as well as the distribution of frames within story type, indicates that multimedia platforms are useful for telling human interest stories. However, the presences of particular elements do seem to lend themselves to human interest stories more than others. Because audio slideshows (and, likewise, interactive packages that rely heavily on audio slideshow or video content) rely on audio recordings of the subject to provide structure to the narrative being presented, they are often utilized in cases wherein an interview with the subject can be recorded. Whereas conventions in text stories and video stories abridge the length and frequency of subject quotes and intersperse narration from the reporter, audio slideshows allow uninterrupted flow of the subject's own words, along with a chance for the synchronized presentation of visual content.

In light of educational research theories that posit that multi-sensory presentations can increase learning if the information being presented through the various channels is presented with temporal and topical synchrony, another important finding was the relative concurrence in this sample between the textual and visual frames used to cover the Iraq War. While this information was only coded on the level of individual story, the results indicate that relatively few multimedia stories involve visuals poorly matched to the narrative.

The photo galleries and slideshows that used no sounds were less likely to present human interest stories, and as a result more likely to present stories using "hard news" frames. The photos and their captions, whether shot by newspaper staff or from a wire service, tell the story of recently transpired news events by presenting content that is heavy on images and light on words. These stories maybe useful and cost-effective applications of multimedia technology, because they are not pegged to news events that have a specific date and time, and thus can be featured by the Web site for a longer period of time without seeming irrelevant.

Limitations. This study was intended as an exploratory study into the use of multimedia news stories by online newspaper sites, and into the study of framing as related to multimedia news stories. Naturally, this early in the academic analysis of multimedia content, there exist a number of methodological limitations and conceptual limitations that limit the potential scope of its findings. The sample of stories in this study was, in various ways, limited by cost, time technology, and decisions about which online news sites to analyze.   Other limitations stem from the method choice of content

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analysis, which cannot account to assess how interactivity affects the transfer of framing dimensions from media to audiences.

The first sampling limitation the study encountered is limiting the study to 100 newspaper sites. The study sample was a convenience sample of the population of stories available from 100 news Web sites in 2007, a group of Web sites that certainly is unlike another group of 100 news sites. By focusing only on online newspaper sites, this study did not encompass the use of multimedia platforms by other Web news sources, including broadcast-affiliated sites such as *CNN.com* or *MSNBC.com*, or news Web sites that have other or no offline affiliations. These sites also feature prominently in Americans' use of Web media for news, and their exclusion omits content that is prominent in depicting the Iraq War to much of the nation.

The size and effectiveness of the convenience sample may have been limited by other factors common to content analyses on the Web. One such limitation of Web-based content analyses is the inability of researchers to retrieve content that was published online and subsequently have been taken down or moved to a different URL (Ha & James, 1998). The sampling procedure in this study attempted to minimize such loss of content by following a multi-step flow chart, but even so, 3 stories originally flagged for inclusion in the sample during 2007 were unavailable for download during coding in January and February 2008. The text-oriented nature of Web search may also have been a limiting factor in the location of multimedia content through site-specific or open-Web search engines. The missing content may have biased the sample toward stories which were favored by newspaper Web site editors and administrators, and which thus remained on the Web site while others may have been removed. It is also possible that some

stories were altered or edited from the original form in which they were posted and viewed.

Locating an appropriate unit of analysis for the study of media content has often been a difficult factor for researchers, but the study of multimedia content may pose particular and novel challenges. While many of the stories coded for this study were clearly discreet, standalone units, some uses of multimedia in covering the Iraq War made it harder to determine where one story begins and ends. When designing coding schemes for multimedia story types, it is important to define stories by their utilization and not solely by the technology used to implement them online. The software used to create some of these multimedia stories will continue to evolve and change, but the story types themselves may still remain a useful part of news sites' repertoire and news audiences' lexicon. The trade-off for not making a technology-specific definition of an interactive package was having that definition instead encompass a wide variety of stories that could be presented cohesively on the same online page. For example, the sampling procedure yielded several Web pages which were home to serialized stories, each of which had run in the site's print newspaper equivalent over the course of successive dates. Online, however, these stories were presented as one cohesive unit, containing the text and images from the original stories as well as multimedia content. The two examples below illustrate the difficulty in categorizing this content into discrete units.

Thirdly, the process of selecting the sample yielded information about how quickly newspapers are adopting multimedia story platforms. Several newspapers' multimedia archives did not reach back to the beginning of 2007, indicating that the paper had likely started posting (or perhaps merely archiving) multimedia content less

than a year ago. As papers adjust their practices and staffs to compete with industry

leaders, and as broadband access for Web audiences continues to rise, it is reasonable to

expect that the volume of multimedia news content will continue to rise for the next

several years.   In addition, as the volume of content grows, it may become easier for

researchers to standardize procedures for locating the content. As of early 2008, most of

the newspaper websites in this sample did not feature a means of searching site content

that would restrict results to multimedia stories. At the opposite end of the spectrum was,

once again, *the New York Times*, which not only features a multimedia-specific search

engine, but also allows users to restrict searches and sort results by multimedia story type.

Recommendations for Future Research. While the data collected in this study

highlight that multimedia platforms are playing a significant role in many papers' news

coverage, relatively little research has been done into the production end of multimedia

news or in how multimedia news presentations influence knowledge, attitudes, and

behaviors of their viewers. Scholars interested in the utilization of multimedia platforms

by news organizations would be well served by looking at the process via which

decisions are made regarding how to cover certain events. With an expanding menu of

choices for story platforms relevant to online coverage, editors as well as photographers

must decide how stories will be covered for print and online media outlets.

In the case of print newspapers and their online counterparts, it would be

important to determine whether many of these online stories are intentionally planned

prior to sending out staffers, or whether many of them serve as a means of dealing with

"extra" image, audio, or video content. In addition, future research could analyze the

dissemination and use of templates that facilitate the creation of particular multimedia formats. Whether designed by internal staffers or distributed broadly (such as SoundSlides), the adoption of templates not only provides insight into the labor required for production of a particular story type, but also serves as an indicator of future adoption and distribution of that story type by news media as a whole.

Analysis of how newspapers organize their multimedia/online staffs may also show trends in the newspaper organizations' de-emphasis of their print product. The production of multimedia news necessarily entails staffing a newsroom with individuals capable of gathering the media content needed and producing a cohesive package from the content gathered. The Web's 24-hour news cycle has put new demands on print and broadcast news organizations to supply content, and it remains to be studied whether this content is being supplied by traditional reporters and photographers that have had to acquire new media skills, or individuals trained in new media production and videography that previously had no place on a print publication staff.

A second area that would benefit from further research is the ability of Web news users to find, locate, and effectively use multimedia stories online. Although this study followed a flow-chart procedure to locate multimedia content on the topic of the Iraq War, the process revealed a wide variation in the location and prominence of multimedia stories within online newspaper Web sites. Findings in this area would be useful in determining whether multimedia stories on print-affiliated Web sites are more often accessed by viewers who also read text stories on a similar content area.

Future research into the role of multimedia content and how it framing would benefit from analysis of the non-multimedia coverage that appeared on the newspaper

Web sites in the sample. This benefit would be twofold. First, a study of how the other

online news content – namely, text stories, video-only stories, and audio-only stories –

addressed the same framing dimensions would provide a useful contrast in comparison to

the multimedia coverage. Perhaps of greater significance, however, would be

information about the co-publication and hyperlinking between traditional stories and

related multimedia stories, which could further illuminate the role of multimedia stories

in online news coverage. Such information would allow a distinction to be drawn

between multimedia stories that were published clearly as stand-alone stories and those

that may have been published to coincide with other content.   Another benefit of

including this other content in the coding sample would be to denote (if possible) when

subjects quoted or depicted in multimedia stories were also featured in other content, and

paint a picture of the extent to which these stories may stem from photos or audio "left

over" from traditional newspaper stories.

The second area in which further research would clarify the role of multimedia

stories in news coverage is the field of media effects research. In order to better develop

an understanding of how users interact with multimedia news content, further

experimental research is needed into how the novel elements that define multimedia, such

as interactivity and non-linear navigation, affect the story's ability to shape its viewers'

knowledge and attitudes. While many media effects researchers are interested in the

study of Web media, very little research has been done on the use of multimedia in a

news context. While one landmark study by Sundar (2000) found that multimedia news

content led to lower recall in comparison with text content, changes in Web content and

its audiences in the past eight years warrant a re-examination of these results. Web users

today interact with sound and moving images at much greater rate than even a few years ago; the widespread use of video-sharing site YouTube and CNN.com's marked decrease in text-only stories are but two examples. A similar argument can be made for offline computer uses, as more users become accustomed to sitting at their keyboard to edit pictures and video as well as written documents.

Studies focusing on customization of Web portals have found that perceived interactivity of a portal influences the degree to which users feel in control of the content they are seeing, which in turn leads to more positive evaluations of the content (Sundar, Kalyanaraman, & Brown, 2003; Kalyanaraman & Sundar, 2006). Navigation schema within multimedia story types allow users varying levels of interaction, ranging from stories that play through start-to-finish to stories where users select each image individually from a gallery of thumbnail images that functions like a table of contents. An increase in user control over the order and rate in which images are presented may influence positive evaluations of the content.

A key aspect of multimedia news that needs to be addressed is the level of audience enjoyment of the content – that is, the platform through which the content is delivered-- and the role this enjoyment plays in the effects of the content. Unlike print or broadcast media, the Web has become a means through which both static text and moving images are routinely consumed by audiences.

The above research would be of value to media producers as well as academics. From a scholarly perspective, this study could add clarification to the study of how cues through multiple processing channels – audio, image, text – can be utilized most effectively to transmit information to audiences. From the vantage point of newsroom

staff, this information could be used to develop standardization in navigation formats and use of sound for multimedia stories, and could inform decisions that balance the cost of including sound in slideshows against the value added by sound.

Conclusion.   The idea that World Wide Web news coverage provided by print and broadcast media outlets is merely "shovelware" has become an anachronism. While Dimitrova & Neznanski (2006) supported the same claim by referring to hyperlinks and images in online text stories, the volume, scope, and variety of multimedia news stories published by print newspapers in 2007 show a higher degree of evolution. By bringing together audio, video, images, and text into navigable stories, these story types exemplify a frontier in the much-discussed area of media convergence. Their production and distribution are signs of changing practices and the adoption of new routines by print news media, and consequently, by their increasingly wired audiences. While the audience for online multimedia stories may be small in early 2008, the stories are available and linked to other stories for longer than many text stories online.

The role of these new story types in transmitting meaning and shaping how their audiences see the world remains unclear. If, as prior research suggests, exposure to media frames influences the audience opinions of the content in those frames, then there as news media adopt new methods of conveying those stories, it becomes important to analyze how the changes affect these processes of influence. The Web's evolution into a delivery device for integrated, interactive news media involves changes at every level of media production and consumption, from corporate mergers and content-sharing across content types to shifts in the times and places in which consumers consume news. While

the shift toward interactive, heavily visual content is just one aspect of these changes, it is a shift that may undermine previous assumptions about the linear structure of news and the role of narrative vis-à-vis visual information.

I hope that this study can serve as a reference point for future scholarship in addressing how multimedia is used in news coverage, and also how the meaning and content of multimedia news stories is analyzed. The variables conceptualized and coded for provide a template for the variety of information that contributes to how multimedia stories transmit information, and serves as one example of the multi-dimensional approach needed by scholars to effectively study news media that utilize multiple information channels and non-linear navigation. While the approach utilized in this study was not without limitations, the data collected provide a snapshot of contemporary use of a number of multimedia platforms to cover news events.

Appendix 1: Coding Sheet

Multimedia Framing of the Iraq War

Coder ID #

Story Title:

Story Number:

Source Number:

Problems/Comments/Errors:

Story Type: (CIRCLE ONE)   Photo Gallery/Slideshow   Audio Slideshow   Interactive Graphic   Interactive Package   Text Article with Embedded Video   Other

Navigation Control: (CIRCLE ONE):   Low (Autoplay)   Medium (Forward/Back)   High (Menu/Map/Thumbnails)

A. Depiction / Quotation (code during viewing)

A1. Use of sound (CHECK ONE)

___ No sound
___ Background sounds only, no narration
___ Background sound and sound bites, no narration
___ Narration: Reporter
___ Narration: Reporter, with sound bites of others
___ Narration: Subject
___ Other (specify): _____

A2. Subjects in the story (CHECK ALL THAT APPLY) Are any of the following individuals:

Depicted in the story	Quoted in the story
___ U.S. soldiers	___ U.S. soldiers
___ families of U.S. soldiers	___ families of U.S. soldiers
___ U.S. national politicians (administration, Congress, etc.)	___ U.S. national politicians (administration, Congress, etc.)
___ U.S. local politicians (mayors, members of state Congress, etc.)	___ U.S. local politicians (mayors, members of state Congress, etc.)
___ U.S. civilians, other	___ U.S. civilians, other
___ Iraqi soldiers	___ Iraqi soldiers
___ Iraqi politicians	___ Iraqi politicians
___ Iraqi civilians	___ Iraqi civilians
___ Other nationals	___ Other nationals

A3. Do any of the subjects in the story refer to the purpose or objective for War: (CHECK ALL THAT APPLY)

___ soldier or other military personnel
___ family member of soldier
___ government official
___ other civilian
___ other (specify): _____

A3B. If so, are any of the following mentioned? (CHECK ALL THAT APPLY)

___ anti-terrorism
___ anti-weapons of mass destruction
___ Iraqi liberation from Saddam Hussein
___ rebuilding Iraq after initial destruction   ___ other (specify) _____

A4. Does the article (or any sources therein) allocate blame for the duration of the War? (CHECK ALL THAT APPLY)

___ No
___ Yes, blamed on U.S. politicians /military
___ Yes, on Iraqi resistance
___ Yes, other/multiple

A5. Does the article mention extended or repeated tours of duty for U.S. military personnel? (CHECK ONE)

___ Yes
___ No

B. Framing Variables   (code after viewing)

B1. Predominant Framing of the Story

Dominant Textual Frame (CHECK ONE)	Dominant Visual Frame (CHECK ONE)
___ military conflict	___ military conflict --combat
___ violence of war	___ military conflict --downtime
___ human interest	___ violence – property
___ rebuilding of Iraq	___ violence – corporeal
___ responsibility	___ human interest – soldier before/during war
___ other	___ human interest – soldier/vet after war
	___ human interest – other military personnel / veteran of previous war
	___ human interest – civilian (non-soldier)
	___ other

B1A.   If HUMAN INTEREST – Main subject

___ Troop Deployment
___ Soldier visits home or returns / family awaits visit
___ Soldier funeral / tribute to deceased to soldiers
___ Combat in Iraq
___ Preparation/Training for Combat (stateside)
___ Anti-War Protest
___ Government Proceeding Related to War
___ Injured/ill soldiers and/or veterans' medical care
___ other (specify): _____

B2. Story Framing Dimensions:

Time (CHECK ONE)	Space
___ Past	___ Individual
___ Present	___ Community
___ Future	___ Regional
	___ National
	___ World

Appendix 2: Coding Protocol

Multimedia Framing of the Iraq War
Coding Guide

Thank you for your participation in this study. I hope that you too can learn something through your participation, and I'm grateful to have you be part of the study team.

Coding Philosophy:

This study has two purposes:

1) to examine how online multimedia stories are used by newspapers to frame coverage of ongoing news events in general , AND

2) to examine how these stories were used in 2007 coverage of the ongoing Iraq War in particular.

Most of the coding will be done at the level of the "multimedia story," a unit which is frequently very clear to define, with some exceptions. A majority of the content that has been sampled for this study takes the form of either a photo gallery or an audio slideshow. Both of these article forms rely on a sequence of pictures to tell the narrative of the story. They are usually presented in a linear format, starting with a title frame or picture, and allowing the viewer to navigate forward and backward. Sound and/or captions provide additional information to supplement the photos. In some cases, the gallery may be presented as a homepage with a series of thumbnail photographs.

How to code:

Please access the coding materials via the link provided: www.wojdynski.com/multimediawar.html On this page, you will find a list of the stories that you have been assigned to code. Each story is numbered, and the number and title of the story serve as a hyperlink to that story. Open the story in your web browser by clicking on the link, or right click and select "Open in a New Window" or "Open in a New Tab" for ease of navigation to your coder page.

Once you have loaded the story, be sure you navigate through the entire story before you finish coding. Some of the variable may require you to keep a tally of the number of times a particular person is used or quoted in the story, and it is important to ensure the accuracy of these counts.

Tips for coders:

In order to make sure that all articles are coded equally well, and to maximize the value of the data collected, please try to set fair limits when deciding how many stories to code at once. Because some stories will take longer than others, we have not defined a hard maximum number, but we suggest limiting yourself to 2 hours of coding per sitting, and a maximum of two sittings per day.

Top Section: Story Information

The information in this section should be coded immediately after opening the story. If the story has an autop-play function, you may want to pause the story while filling in this information

Coder ID: Please use your first and last initial as your coder ID.

Coding Date: Please enter the date that the coding took place in MM-YY form (such as *11-24* for November 24).

Story Title: The title or heading used on the story page will be listed in the link provided on the coder page. When you open the article, there are three places to check to ensure the title is correct.

1) If there is a title or headline within the graphic, slideshow, or Flash presentation, list this as the title.
2) If step #1 yields no title, look on the rest of the Web page in which the story is embedded for a title.
3) If step #2 yields no title, look at the top (usually a blue bar) of your Web browser window to see if there is a title listed there.

Story Number: The Story Number for each article is listed as the first character(s) of the hyperlink to each story. Please enter the article number as listed on the coder page.

Source Number: The newspaper from which each multimedia story is linked is also listed on the coder page. When you open each article, check for information on the page that confirms that the source was listed correctly, and that the article that has loaded is the same one referenced in the link. Enter the source number from   Appendix 1: Sources, provided in this packet.

Story Type:

There will be four types of stories analyzed for the purpose of this study .

If you find that a story included does not fit one of the five formats below, please check the field marked "other," and describe the story format in your own words.

Photo Galleries/Slideshows: Many news outlets have utilized this format for presenting extra photographic images and captions that do not have an accompanying text stories. These are often presented as a string of separate HTML pages (one image per page) that maybe viewed in a pre-set order by using Next/Previous navigation, or out of sequence by clicking on buttons with the corresponding number of the picture.

Audio slideshows: An alternate image slideshow format involves the use audio that plays underneath the images. Because the central narrative is organized around this audio, these stories usually will play through from beginning to end unless users choose to pause them. Many audio slideshows are done with the same template, and will have a navigation that resembles the image below.

Example of typical audio slideshow template (SoundSlides).

Interactive graphics: These features are interactive versions of info graphics. Usually used to convey visual diagrams, interactive graphics allow users to navigate through different perspectives, and click on a particular area of the graphic to receive further image, text, audio, or video information about the specific content there depicted. The primary interface for info graphics is usually one diagram or drawing, with parts of drawing functioning as hyperlinks.

Interactive packages: Often labeled as "special report" or "interactive feature," these stories provide a comprehensive structure for integrating any one or more of the above media forms, standalone video, text, audio, and animations. Unlike the other formats, interactive packages often comprise several different narratives that may be thematically related. Interactive packages usually feature a menu or navigation bar included in the story, which allows the user to select which segments to view, and in what order. These presentations often add value to the individual components by incorporating meaning to the navigation, such use of a map to locate five clickable stories about towns in a geographical region.

User Control Level:

This variable asks you to assess the level of control the user has over the content in the story. The three answer categories are described below.

Low: If the story does not allow the user to control the content by clicking, and/or plays automatically from beginning to end, this category should be selected. Offering a "Pause" button, but no other navigation, is also an example of low user control.

Medium: If the story allows the user to move in a controlled but linear fashion, code the story as having medium user control. The most common navigation elements in stories at this level will be arrow keys, or "Next" and "Previous" or "Back" buttons.

High: If the story allows the user choice over the order in which s/he views the story elements, it should belong in this category. One example of a high user-control story is one that uses a menu of thumbnail pictures to load full size pictures and captions.

Hidden/optional features:

- If a story features a thumbnail menu that can be accessed from any frame, either by clicking or by mousing over the navigation bar, code as HIGH user control.

Section A: Depiction and Quotation

A1. Use of Sound

If there is no sound in the story, mark "no sound." If there is sound, there are two decisions to make in choosing the proper category.

First, you must decide if the story has narration. A story features narration if a subject's or reporter's voice is used to provide an ongoing description of present or past events. Secondly, if there is narration, you must determine whether it's provided by the subject or by the reporter.

If there is no narration, you must code the use of natural sound. If no subjects are shown or heard describing the events (for at least one whole sentence), code "natural sound only." If subjects are included in with the natural sound, code "natural sound and subjects, no narration."

EXAMPLE: An audio slideshow opens with a priest reading at a soldier's funeral. Then the story cuts to sounds of people exciting the church. Later, the soldier's wife is seen talking directly at

the viewer, describing the story of how her husband died.   This should be coded as *Natural sound and subjects, no narration.*

A2. Subjects in the story: Depicted and Quoted

These variables are about the primary subject of the story.   Place a checkmark next to any of the groups of individuals that are depicted or quoted in the story.   Depicted, for the purpose of this study means having any part of their body shown via static or moving image.   Quoted, for the purposes of this study, means having their words directly represented via text or sound.

A3. Do any subjects in the story refer to the purpose or objective for War: (CHECK ALL THAT APPLY)

For this variable, check the appopriate subject category if s/he mentions any of the purposes listed below (in A3B), or any other purpose that can be interpreted as justification for the United States' invasion of Iraq or ongoing presence therein.

A3B. Purpose of Objective of War

Please check any of the following if they are mentioned in the story

anti-terrorism   -- mention of September 11, World Trade Center, Al-Qaeda, or other terrorist organizations etc.

anti-weapons of mass destruction -- mention of WMD, nuclear weapons, biological warfare, etc.

Iraqi liberation from Saddam Hussein – any explicit mention of Hussein, or mention of human rights abuses under Hussein.

rebuilding Iraq after initial destruction – any mention of setting up infrastructure, transitioning from American to Iraqi peacekeeping forces, training Iraqi troops, setting up new Iraqi government, etc.

A4. Does the article mention of extended or repeated tours of duty for U.S. military personnel?

This may be mentioned without using the phrases described above, and is as likely to be mentioned by the reporter as by the subjects of the story.   Other words to watch for include "redeployment."

A5. Does the article allocate blame for the duration of the War?

Blame for the duration of the war is most likely to be mentioned by subjects within the story. Mark a "yes" for the category only if there is a statement directly mentioning

Section B: Framing Variables

Dominant Textual Frame

Scholars studying press coverage of wars, and even of the Iraq War in particular, have found that news stories about the war tend to rely on particular thematic structures. Use the definitions below to identify which of the following BEST describes the story:

Military Conflict Frame – emphasizes military action taking place in Iraq, either between formal armies, or between U.S. troops and insurgents.

Violence of War Frame – focuses on destruction of property, death, and injury during the war. If a story focuses on death and injury by profiling one or several victims in-depth, code as *human interest* instead.

Human Interest Frame – An emphasis on the personal stories of human participants in the Iraq War.

Rebuilding of Iraq Frame – A focus on the rebuilding of social infrastructure and buildings in Iraq, as well as the establishment of social order.

Reponsibility Frame – The primary emphasis of the story is on the resolution of the war, long-term effects of the war, anti-war protesting, or predictions about war progress over a future course in time. Stories profiling individual protestors should be coded as *human interest*.

Distinguishing Between Human Interest and the other frames: Stories on a given subject may be frames as human interest stories or as one of the other frames, depending on the particular story. For example, a factual news story about a war protest should fall under "responsibility," while a story that focuses on one or several participants discussing their reason for participating in the protest should be coded as "human interest." Similarly, a 10-image slideshow depicting ten different wounded/killed persons, without other context for their lives, should be "violence of war." On the other hand, a 10-image slideshow that focuses on three wounded/killed persons, and their recovery or their families' struggles in the wake of their death, should be coded "human interest."

The main distinguishing factor in such coding decisions should be whether the story primarily serves to highlight individuals involved in a larger news story, or whether the focus is on reporting information, with the individuals serving simply as exemplars.

Dominant Visual Frame

Scholars studying press coverage of wars, and even of the Iraq War in particular, have found that news stories about the war tend to rely on particular thematic structures. Use the definitions below to identify which of the following BEST describes the story:

Military Conflict -- Combat – Military action depicted via scenes of combat.

Military Conflict -- Downtime – Military action depicted via scenes of soldiers in Iraq not engaging in combat.

Violence – Property – Images are primarily scenes destruction of property, death, and injury during the war. If a story focuses on death and injury by profiling one or several victims in-depth, code as *human interest* instead.

Violence – Corporeal -- Images primarily depict damage done to human bodies that were killed or injured during the war.

Human Interest—Soldier Before and During War: Images are primarily of a soldier's life before going to war, taking part in training, and/or in Iraq.

Human Interest—Soldier After War: Images are primarily of a soldier on U.S. soil after returning from Iraq

Human Interest – Civilian: Images primarily depict non-military personnel, including, but not limited to, families of U.S. soldiers, U.S. government officials, Iraqi citizens, and/or anti-war protestors.

EXAMPLE: A slide show that mainly features pictures of a family waiting for their son/husband to arrive at the airport, followed by several of him hugging his family, would be coded as *human interest – civilian.*

Main Subject of Human Interest Stories

This variable is only for stories that had "human interest" as one of the above two categories (dominant visual or textual frame).

When choosing a category for this variable, keep in mind the geographical setting of the story. If the story is about a soldier in the U.S. preparing to leave, it should be coded

"preparation/training." If it is about one or more soldiers' actions in Iraq, it should be coded "combat in Iraq."

If the story is not about soldiers at all, it should be coded one of the last two categories (anti-war protest or government proceeding related to war), or "Other." If you code a story "other," please supply a description or summary of the events in the story.

Time

This section asks you to judge the primary time frame of the story you are coding. Stories that are predominantly focused on previewing future events should be coded as future. Stories that are referring to a period of time that is not recent to when the story was published will should be coded as past.

Go through the story looking for events that took place or will take place at an identifiable time. Choose the time frame option that best captures the predominant time focus of the story.

Examples:

 A story looking back on the initial Iraq invasion on its 4-year anniversary. Code: past

A story about a soldier's funeral, focusing on his family's mourning. Code: present

A story about a soldier's funeral that chronologically recaps milestones in his military career. Code: past

Distinguishing past v. present: Many stories rely on language such as "last night" or "last week" even when covering news stories that are relevant to the present. However, if a story is set in a particular time frame that is closed – i.e., "last November" or "2003 invasion" – or if it focuses on events in a soldier's life prior to his deployment, or prior to her death—code as "past."

Space

Please use the definitions below, from Chyi and McCombs (2004):

Individual level: A news event is framed within a scope limited to the individuals involved in an event (e.g., a crime story featuring the particulars about the perpetrator);

Community level: A news event is framed as relevant to a particular community (e.g., a story on a recent tution increase focusing on student reactions), up through and including one particular metropolitan area.

Regional level: A news event is frames as relevant to a more general population, such as residents of a multi-city area, or a state (e.g. A debate about the location of a new airport in a city)

National level: A news event is framed in terms of social or national significance (e.g., a story associating the O.J. Simpson case with racism);

World level: A news event is framed from an international perspective (e.g., military action in a foreign country analyzed in terms of power relationships among different countries).

Distinguishing National and World: If the story is solely from a U.S., or solely from an Iraqi perspective, code as "National." If it includes quotes from both Americans and Iraqis, OR talks about outcomes for the U.S. and Iraq, OR certainly if it mentions other nations, code as "World."

Source Numbers

Newspaper Name	
Akron Beacon Journal	73
Albany Times Union	79
Arizona Daily Star (Tuscon)	63
Arizona Republic (Phoenix)	12
Asbury Park (N.J.) Press	70
Atlanta Journal-Constitution	13
Austin-American Statesman	31
Baltimore Sun	34
Birmingham News (al.com)	57
Boston Globe	6
Boston Herald	35
Buffalo News	76
Charlotte Observer	44
Chicago Tribune	8
Cincinnati Enquirer	28
Commercial Appeal (Memphis)	81
Contra Costa (Calif.) Times	65
Daily Herald (Arlington Heights, IL)	83
Daily Press (Newport News, Va.)	91
Dallas Morning News	15
Dayton Daily News	74
Democrat and Chronicle (Rochester)	78
Denver Post	33
Des Moines Register	69
Deseret News	55
Detroit Free Press	21
Detroit News	24
El Paso Times	97
Florida Times-Union (Jax, FL)	71
Florida Today (Melbourne)	93
Grand Rapids Press (mlive.com)	36
Greensboro News & Record	100
Greenville (S.C.) News	94
Hartford Courant	62
Honolulu Advertiser	64
Houston Chronicle	10
Indianapolis Star	41
Journal News (Westchester Co., NY)	85
Kansas City Star	37
Knoxville News Sentinel	72
Las Vegas Review Journal	38
Lexington Herald-Leader	68
Los Angeles Daily News	30
Los Angeles Times	5
Louisville Courier-Journal	49
Miami Herald	23
Milwaukee Journal-Sentinel	27
Mobile Press-Register (al.com)	58
Morning Call (Allentown, Pa.)	92
New York Daily News	11
New York Post	9

New York Times	1
News & Observer (Raleigh)	48
News Press (Fort Myers, Fla.)	99
News Tribune (Tacoma)	75
Newsday (New York)	14
Oklahoman (Okla. City)	77
Orange County Register	54
Oregonian (Portland)	42
Orlando Sentinel	39
Palm Beach Post	66
Patriot News (Harrisburg) (pennlive.com)	87
Philadelphia Inquirer	17
Philadelphia News	18
Pittsburgh Post-Gazette	19
Plain Dealer (Cleveland)	32
Post-Standard (Syracuse)	84
Providence Journal	82
Record (Bergen Co., NJ)	67
Richmond Times-Dispatch	50
Roanoke Times	80
Rocky Mountain News (Denver)	53
Sacramento Bee	47
Salt Lake Tribune	60
San Antonio Express-News	45
San Diego Union-Tribune	25
San Francisco Chronicle	7
San Jose Mercury News	16
Sarasota Herald Tribune	89
Spokesman Review (Spokane)	88
St. Louis Post-Dispatch	43
St. Paul Pioneer Press	51
St. Petersburg Times	22
Star -Telegram (Fort Worth)	40
Star Tribune (Minneapolis)	26
Sun-Sentinel (South Florida)	29
Tampa Tribune	52
Tennessean (Nashville)	46
Times-Picayune (N.O.)(nola.com)	56
Toledo Blade	96
Tribune Review (Pittsburgh)	59
Tulsa World	90
USA Today	3
Virginian-Pilot (Norfolk)	61
Wall Street Journal	4
Washington Post	2
Washington Times	20
Wichita Eagle	95
Winston-Salem Journal	98
Worcester Telegram & Gazette	86

Appendix 3: Additional Data Tables

Appendix 3.1. – Online Readership Data and Multimedia Stories in Sample, By Newspaper

Source Number	Newspaper	Unique Visitors per month, as of Nov 2006	Multimedia stories
1	New York Times	13,232,524	35
2	Washington Post	10,693,663	26
3	USA Today	10,349,773	2
4	Wall St. Journal	6,312,554	0
5	Los Angeles Times	4,351,029	4
6	Boston Globe	3,798,561	6
7	San Francisco Chronicle	3,511,709	0
8	Chicago Tribune	2,999,485	1
9	New York Post	2,747,992	0
10	Houston Chronicle	2,341,903	0
11	New York Daily News	2,018,893	4
12	Arizona Republic	1,947,657	0
13	Atlanta Journal-Constitution	1,900,375	1
14	Newsday	1,848,538	1
15	Dallas Morning News	1,656,792	2
16	San Jose Mercury News	1,501,522	0
17	Philadelphia Inquirer/News	1,472,077	2
18	Philadelphia News	1,472,077	0
19	Pittsburgh Post-Gazette	1,467,065	0

20	Washington Times	1,443,908	2
21	Detroit Free Press	1,339,598	0
22	St. Petersburg Times	1,259,558	1
23	Miami Herald	1,249,144	1
24	Detroit News	1,238,395	0
25	San Diego Union Tribune	1,229,585	5
26	Minneapolis Star Tribune	1,153,553	3
27	Milwaukee Journal Sentinel	1,120,048	2
28	Cincinnati Enquirer	1,074,234	0
29	South Florida Sun-Sentinel	1,048,101	0
30	Los Angeles Daily News	1,030,296	6
31	Austin-American Statesman	1,027,228	1
32	Cleveland Plain Dealer	1,022,786	1
33	Denver Post	1,014,018	3
34	Baltimore Sun	1,002,127	0
35	Boston Herald	998,205	0
36	Grand Rapids Press	986,316	7
37	Kansas City Star	949,925	0
38	Las Vegas Review Journal	930,574	0
39	Orlando Sentinel	919,973	3
40	Fort Worth Star Telegram	910,866	0
41	Indianapolis Star	878,072	0
42	Portland Oregonian	860,674	2
43	St. Louis Post-Dispatch	799,616	3

44	Charlotte Observer	766,370	2
45	San Antonio Express-News	765,860	5
46	Nashville Tennessean	747,472	0
47	Sacramento Bee	691,951	0
48	Raleigh News & Observer	688,503	2
49	Louisville Courier-Journal	680,028	0
50	Richmond Times-Dispatch	668,903	1
51	St. Paul Pioneer Press	655,727	7
52	Tampa Tribune	637,247	0
53	Rocky Mountain News	625,178	10
54	Orange County Register	604,157	1
55	Deseret News	599,910	0
56	New Orleans Times Picayune	595,759	0
57	Birmingham News	582,243	1
58	Mobile Press-Register	581,507	0
59	Pittsburgh Tribune Review	567,000	0
60	Salt Lake Tribune	534,678	2
61	Norfolk Virginian-Pilot	523,562	3
62	Harford Courant	502,585	1
63	Arizona Daily Star	494,632	10
64	Honolulu Advertiser	490,655	0
65	Contra Costa Times	485,317	1
66	Palm Beach Post	480,126	0
67	Bergen County Record	478,445	0

			0
68	Lexington Herald-Leader	475,416	
69	Des Moines Register	445,457	2
70	Asbury Park Press	428,669	0
71	Florida Times-Union	382,752	4
72	Knoxville News Sentinel	365,782	0
73	Akron Beacon Journal	365,593	0
74	Dayton Daily News	360,200	0
75	Tacoma News Tribune	346,415	2
76	Buffalo News	336,835	0
77	The Oklahoman	327,565	7
78	Rochester Democrat and Chronicle	317,381	0
79	Albany Times Union	317,367	0
80	Roanoke Times	314,867	0
81	Memphis Commercial Appeal	312,505	0
82	Providence Journal	303,443	2
83	Arlington Heights Daily Herald	303,422	0
84	Syracuse Post-Standard	300,553	0
85	Journal News (Westchester Co.)	300,438	0
86	Worcester Telegram & Gazette	285,597	1
87	Harrisburg Patriot-News	254,695	0
88	Spokane Spokesman Review	249,609	1
89	Sarasota Herald Tribune	246,941	0
90	Tulsa World	228,755	0
91	Newport News Daily Press	220,108	0

92	Allentown Morning Call	217,959	0
93	Florida Today (Melbourne)	190,705	1
94	Greenville News	184,771	0
95	Wichita Eagle	183,078	0
96	Toledo Blade	181,111	0
97	El Paso Times	179,754	10
98	Wiston-Salem Journal	169,339	0
99	Fort Myers News-Press	165,606	0
100	Greensboro News & Record	156,460	1

Table 3.2 Intercoder Agreement and Scott's Pi values per Variable

Variable	Intercoder Agreement (%)	Scott's Pi
Story Number	100	--
Source Number	100	--
Story Type	96	.92
Navigation	88	.80
Sound	94	.90
Depicted – U.S. Soldiers	99	.94
Depicted – Families of U.S. Soldiers	93	.85
Depicted – U.S. National Politicians	94	.63
Depicted – U.S. Local Politicians	97	.85
Depicted – U.S. Civilians, other	91	.81
Depicted – Iraqi Soldiers	96	.70
Depicted – Iraqi Politicians	94	.57
Depicted – Iraqi Civilians	96	1.00
Depicted – Other Nationals	100	1.00
Quoted – U.S. Soldiers	100	.94
Quoted – Families of U.S. Soldiers	96	.88
Quoted – U.S. National Politicians	96	.55
Quoted – U.S. Local Politicians	100	undefined
Quoted – U.S. Civilians, other	94	.57
Quoted – Iraqi Soldiers	100	1.00
Quoted – Iraqi Politicians	100	undefined
Quoted – Iraqi Civilians	100	1.00
Quoted – Other	96	undefined
Purpose	97	.74
Specific Purpose	97	.74
Duration	100	1.00
Mention of Extended/Repeat Deployment	94	.72
Dominant Text Frame	93	.82
Dominant Visual Frame	78	.72
Subject, Human Interest Stories	81	.77
Time	90	.68
Space	78	.66

Table 3.3: Navigation and Use of Sound by Story Type

	Navigation			Sound						
	Low	Med	High	None	Back-ground only	Bckgd and sound bites	Narr.: Reporter	Narr: Reporter + sound bites	Narr: Subject	Other
Photo Gallery	2	64	54	117			2		1	--
Audio Slideshow	32	2	19	--	4	6	14	1	28	--
Interactive Graphic	--	--	4	3	--	--	1	--	--	--
Interactive Package	1	--	19	4	--	3	1	1	10	1
Text/Video	1	1	2	1	--	--	--	--	3	--
Totals:	36	67	68	125	4	9	18	2	42	1

Table 3.4 Open-ended Coding Results from "Other" Categories

Variable	Values
Dominant Textual Frame – Other	Unit activation Ceremony Anthropologists Politician visit Movie review Life in Iraq Iraqi Insurgents & YouTube Equipment
Dominant Visual Frame – Other	Equipment Maps/Equipment Movie Stills Politicians Debate Politicians at Hearings Bush w/soldiers Military Hardware Buildings Graphic Maps
Human Interest Story, Main Subject -- Other	Anthropologists in Afghanistan Bush visit War Anniversary Iraqi Expats in Jordan Three Soldiers' Families Children of U.S. Soldiers Sunni Refugees Profile of Iraqi City Jordanian Jihadists Families and Kids U.S. Dentist Sending Candy Abroad Civilian Panel on War Photographer Deserters Support Rally Veteran Student Soldiers Naturalization Ceremony Wedding of Iraq Veteran Homeless Soldier Paralympics Medal Ceremony

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