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An Examination of Broadcast News Coverage Depicting Images of War: Description, Effects,
and Possible Antidote

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People have always been curious about the world around them and wanted to know about events that will have an impact on their lives. For most of human existence, this curiosity was fulfilled by travelers' tales and gossip. The development of "the news" is the natural progression of how technological advances and introduction of specialized techniques for gathering and disseminating information on a regular basis has steadily increased both the scope of news available to us and the speed with which it is transmitted.

Early forms of transmitting news began with word of mouth; news was limited to what someone saw and re-told and generally was accurate primarily in proportion to the proximity of the events to the site where the news was being told. The opportunity for wider dissemination of news came with the invention of printing using movable type, attributed to Gutenberg in 1439 (Steinberg, 1996). Newspapers began to appear across Europe and even in the British colonies as early as 1690, with the Boston publication, *Publick Occurrences* (Lehman-Haupt, 1951).

The first war correspondents were military officers who reported on their campaigns. Julius Caesar wrote lengthy accounts of the Gallic Wars in 54 B.C. More than a thousand years and battles later, the first independent professional war correspondent was assigned to the Crimean War, which ran from 1854 to 1856 (Zangrilla, 2003). William Russell, a correspondent for the *London Times*, became famous with his reports. Britain's declaration of war on Russia had proved "popular beyond belief," in the words of Queen Victoria, and editors at several London dailies decided to feed the public's hunger for detailed accounts of British victories. The *Times of London* resolved to send its own reporters to the front, and others followed. More than

150 war correspondents reported on the U.S. Civil War (Knightly, 2004). The reporter could become as celebrated as the soldier, and vigilant reporting could perhaps prevent some of the atrocities perpetrated in wartime (Knightly, 2004).

The Civil War influenced newspapers more than any other event of the century. The extensive competition to report the war news led newspapers to introduce war correspondents or "specials" who were generally freer to cover events than in modern wars. Alexander Gardner's photos of casualties following the Battle of Gettysburg served to illuminate the costs of war in ways a news story alone never could. Images of combat operations, both positive and negative, can take on an iconic status with the American public (Knightly, 2004).

Further shaping the American culture and views toward war was the invention of television. By the mid 1950s commercial televisions were making their way into homes across America. The first war footage to be broadcast into the living rooms of Americans was the Korean War (Humphrey, 2006). Television was still in its infancy, so the Korean conflict is not widely thought of as a televised war. Ten years later, the combat images of the Vietnam War entered American homes via the television. The presence of television dramatically changed how wars were reported (Braestrup, 1977).

It was one thing to hear or read about the combat operations, but when Americans could see American troops fighting and dying while viewing in the comfort of their own home, it changed war reporting and, some say, American tolerance for war. It was assumed that opinion was also influenced by the visual images of combat operations (Gartner & Secura, 1998).

Since the Civil War, the images of war dead have been of interest to both the public and politicians. Some believe these images have the power to sway public opinion for or against combat operations (Perlmutter, 1999). During World War II, President Franklin Roosevelt

imposed a ban on such photographs but later relented saying that the photos could galvanize support for the war (Perlmutter, 1999). In more recent times, whether or not images have been allowed varies from president to president. Presidents Jimmy Carter and Ronald Reagan allowed the photos of casualties of the different missions and conflicts during their terms. It was not until the first Gulf War, when President George H.W. Bush banned the showing of photos of the remains of dead soldiers arriving at Dover Air Force Base. President Bill Clinton lifted the ban only to have it reinstated by President George W. Bush (Milbank, 2003).

In hopes of adding to the research on the impact of visuals on perceptions and attitudes about war, this paper will examine the impact of broadcast news visuals of war. Specifically, it employs a content analysis to determine the overall tone of war coverage to describe what is covered in television news about the war in Iraq. In addition, it features an experiment to determine the impact of broadcast news footage of U.S. and Iraqi combat operations on viewers. Finally, it examines whether inoculation can protect viewers' attitudes from the impact of broadcast news footage of combat operations.

The Nature and Impact of War Coverage

Department of Defense Polic

The Office of the Assistant Secretary of Defense (Public Affairs) conducts strategic communications. These communications are the transmission of integrated and coordinated U.S. government themes and messages that advance U.S. interests and policies through synchronized interagency efforts (DODD 5122.5, 2000). The guidance provided by the DoD highlights principles involving the release of information. The Principles of Information address the DoD's policy of disseminating information in a timely and accurate fashion. When a request is presented from an outside agency (i.e., the public, media), and is within the parameters of

national security interests and statutory mandates or exceptions, every attempt is made to comply with the request (DODD 5122.5, 2000). Information is not released if it jeopardizes or has a negative impact on national or operational security, threatens the privacy of citizens, or is unlawful (DODD 5122.5, 2000). Information will not be intentionally classified just to avoid releasing such information (DODD 5122.5, 2000).

To further safeguard the public's right to access information, the Freedom of Information Act (FOIA) works in conjunction with the Principles of Information. The FOIA came into effect on July 4, 1967 and "firmly established an effective statutory right of public access to executive branch information in the federal government" (Freedom of Information Act Guide, 2004, p.1). There are seven subsections to the FOIA which establish categories of the types of information that are releasable, records that can be reviewed and copied, exemptions, and definitions of terms (Freedom of Information Act Guide, 2004). The FOIA has undergone revisions over the years to refine its intent and incorporate modern technology to ensure it remains a "vital and continuously developing government disclosure mechanism" (Freedom of Information Act Guide, 2004, p. 3). Under the Principles of Information, the FOIA is fully supported in both "letter and spirit" (DODD 5122.5, 2000, p. 8).

The Statement of DoD Principles for News Media provides guidance for "open and independent reporting" for covering military operations in and outside combat zones (DODD 5122.5, 2000, p. 9). Current DoD policy on the release of visual images depicting casualties is based on military doctrine that uses "common sense, good taste and awareness of safety and security concerns" (AR 360-1, 2000, p. 4). In time of combat operations, the release of such images as photographs or video recordings of recognizable wounded or deceased personnel not identified by name, is prohibited. The overall intent of both DoD and the Army policy and

directives are to give every consideration to the rights of the individuals concerned and the effect of publishing information or photographs and videos would have on families and friends (Army Regulation 360-1).

The Content of War Coverage

The effect of casualties on public opinion has been the subject of much debate. One view is that recent, marginal casualties accumulating at an increasing rate are critical in predicting the direction and magnitude of change in the level of opposition at home (Gartner & Segura, 1998). “Marginal” is defined as those casualties above and beyond what is experienced in normal operations. It could be casualties resulting from a single catastrophic event or higher than the usual casualties suffered in an ordinary combat event. Gartner and Segura (1998) state “the temporally proximate costs, represented as marginal casualty figures, are an important additional aspect of human costs and a critical factor in determining wartime opinion” (p. 278).

In his 1973 treatment, *War, Presidents and Public Opinion*, John Mueller posits the log of cumulative casualties alone swayed public opinion about war, specifically the Korean and Vietnam wars. Other researchers disagree. According to Gartner and Segura (1998), it is the marginal casualties, not cumulative casualties that are important in determining support for a particular war. Gartner and Segura (1998) argue use of cumulative casualties as the sole basis for measuring human war costs is wrong for a few reasons. It cannot help but be correlated with time; the importance of turning points in the war and events which proved to be decisive are not given the importance they should have.

The advantages of the analysis of marginal casualties are many (Gartner & Segura, 1998). First, marginal casualties are more reflective of the information environment in which opinion is formed and can account for important events. Second, marginal casualties are not

correlated with time. Third, marginal casualties capture the importance of salient events, so we are better able to account for the response in opinion.

The twin phenomena of casualty shyness and casualty aversion has been the subject of discussion since the U.S. involvement in Somalia. Casualty aversion is the term given to two distinct concerns: the number of casualties the American people will support and the assumption that the numbers are subject to collapse under the right circumstances (Dauber, 2001).

Visual imagery relates to the second concern as it represents the “right” circumstance to “collapse the numbers” (Dauber, 2001, p. 205). Casualty shyness is the belief held by the military that it can no longer fight wars without the support of the American people. Furthermore, they believe one of the problems with garnering public support is the image of servicemembers coming home in body bags. Casualty shyness has a great deal to do with how the public interprets events when confronted with these images, and how the policy makers and political pundits frame them (Dauber, 2001).

According to Dauber (2001), public support for war is viewed to be brittle under certain circumstances. This was first evident by photos of the Vietnam War, which was due in part to the fact this was the first war for which images were widely available. The majority of these images were captured by military filmographers and depicted combat, combat operations, and moving of casualties. How does that compare to images from the current war? The DoD’s regulations make unlawful the release of any information considered harmful or that would jeopardize or otherwise have a negative impact. The DoD has issued guidelines on what is and what is not lawful and is very accommodating to media who wish to enter the war zone.

In spite of this, the media maintains the right to choose what it will broadcast. There has been little data as to what the coverage of Iraq has been in relation to what content is

emphasized, how objective reports are, what the overall tone is, and what the interest is for reporters. This study will examine the content of these broadcasts and therefore posits the following research questions:

RQ1: What is the content focus of broadcast news from Iraq?

RQ2: To what degree do broadcast news stories about military operations in Iraq manifest objective reporting or opinion?

RQ3: What is the overall tone of broadcast news stories about military operations in Iraq?

RQ4: How often do broadcast news stories about military operations in Iraq feature casualties? Are the casualties U.S. forces, Iraqi forces, or Iraqi civilians?

RQ5: When broadcast news stories about military operations in Iraq feature casualties, do they also include reports of U.S. public opinion about continuing U.S. military presence in Iraq?

Framing is how journalists present their stories, and in the process, give the stories meaning (Kosicki, 2003). A frame enables someone to make sense of a situation or occurrence. Goffman (1974) suggests people understand the world around them by using frames. Frames select attention to particular aspects of reality described (Entman, 1993). The choices journalists make in presenting the news not only affect the salience of issues but also how stories are interpreted by audiences (Pan & Kosicki, 1993). By framing issues in certain ways, the media influence the way people perceive a problem or issue and its consequences, possibly altering their final evaluation of the issues (Jasperson, Shah, Watts, Faber, & Fan, 1998). How the media frames a story impacts social reality (Dillard, Solomon, & Samp, 1996) because frames call attention to certain aspects of reality and direct attention away from other aspects (Entman,

1993). Frames also have the ability to influence a person's support for an issue (Terkildsen & Schnell, 1997).

Overall tone of coverage might impact how the story is framed. An important aspect of framing is whether a story is presented thematically or episodically. According to Iyenger (1991) episodic framing seeks to personalize issues; whereas, thematic framing presents collective or general evidence about issues. Thematic frames provide more evidence, depict the issue more broadly, and place them in a context: Historical, geographical, or otherwise (Iyengar, 1991). Iyengar and Simon (1993) call thematic coverage takeout or backgrounder reports. Thematic frames do not increase salience as powerfully as episodic framing. On the other hand, episodic frames are based on illustrative examples (Iyengar, 1991). They are comprised of concrete instances or specific events (Iyenger & Simon, 1993). Most stories contain aspects of both episodic or thematic framing, but Iyengar (1991) finds there is a dominant frame (episodic or thematic). This study will look into the framing content of these broadcasts and therefore posits the following research question:

RQ6: Do broadcast news stories about military operations in Iraq employ more episodic or thematic framing?

The Impact of War Coverage

Emotion and Affect

For military public affairs practitioners, how graphic pictures from the war zone affect public attitude about U.S. involvement in combat operations is a continuing concern. Can graphic combat footage turn a war supporter into a war opponent? Some think so, and this study is based on the premise that it is crucial to understand how combat images are processed; are they processed more systematically thus affecting more negative views of the Iraq war and

discourage support? Currently, there is no hard evidence on the impact of news footage of combat operations in news stories on an individual's attitude. There are some studies in the advertising realm relating the impact of photographs on attitude that can be drawn from (Singh, Lessig, & Kim, 2000). Some scholars now state that affect refers to the general valence of an emotional state; emotion refers to definite types of feelings that occur in response to any given stimuli (Guerrero, Andersen, & Trost, 2005).

Affect is a more general term than emotions or moods. Guerrero et al (2005) define affect simply as the positive or negative valence of the emotional experience. Guerrero et al (2005), define affect as "the irreducible aspect" of emotion "that gives feelings their emotional, noncognitive character" (p. 300).

Most psychologists basically conceive of an emotion as a complex sequence of responses to a personally relevant stimulus. These reactions occur throughout the brain and body and include cognitive evaluations, bodily and neural changes, motor impulses, and emotion-related thoughts, as well as a particular feeling. Moreover, psychologists usually regard emotions as being focused on a certain object or issue. But affect can also be produced by vague, barely noticed, or even subliminal occurrences, such as a warm, sunny day or a familiar, pleasant melody (Berkowitz, 2000).

Affective valence is considered to be the most fundamental feature of emotion and is thought to be separate from cognitive, bodily and behavioral ties (Guerrero et al, 2005). Further, affect is thought to be an internal state rather than external. Though external states may very well contribute to the way affect is experienced or expressed, it is important to understand these external states are not emotions in their own right.

Emotional responses have both physiological conditions and physiological response components (Frijda, 1986). The three major groups of physiological response mechanisms identified with emotion are those controlled by the autonomic nervous system, fluctuations in the secretion of hormones, and neural responses (Frijda, 1986). Autonomic variables related to emotions are: increased heart rate, blood pressure and blood flow distribution, respiration, electrodermal activity and sweating, gastrointestinal and urinary activity secretory functions, and trembling (Frijda, 1986) to name a few. These physiological responses, known as arousal, are involuntary.

Once emotion is stirred, people have to cope with that emotion. From the outset, they take a position toward their emotion and the consequences of their emotional actions (Frijda, 1986). This stance and subsequent action(s) taken is part of a regulation process. Regulation is defined as an occurrence of processes designed to modify other processes, actions, and experiences elicited by the given situation (Frijda, 1986) and comes in a variety of forms. Regulation of confrontation signifies a person's desire to steer clear of emotional events. Appraisal regulation means that within a sizeable range, appraisals may be modified by selective attention and self-serving cognitive activities. Impulse control refers to an individual's ability to refrain from expressing emotional urges, essentially pushing the emotion into the subconscious, or by amplifying those emotions (Frijda, 1986).

Cognitive-Experiential Self Theory

Processing news stories of military operations in Iraq that feature footage of combat will be more systematically processed by viewers than those stories without footage. This is based on the logic of the Cognitive-Experiential Self Theory, or CEST, as posited by Epstein and Pacini (2001). Visualization is consistent with the view of CEST in that the experiential system encodes

events primarily imagistically. To the extent this is true, imagined experience functions in the experiential system in a similar manner as real experience (Epstein & Pacini 2001). Berger and Luckmann (1966) assert that because people experience reality based on what they see, hear, and experience, and if individuals have no direct contact with those who are different, they frequently use media images to show them others' reality.

CEST suggests three abstract systems that are unpredictably accessible to human conscious awareness. The conceptual systems include the rational conceptual system, the experiential conceptual system, and the associationistic conceptual system. Epstein (1989) suggests the essence of the experiential conceptual system is "is a system adapted to immediate action...which is better suited for analysis where delayed action is appropriate" (p. 10). In contrast to the experiential conceptual system, the rational conceptual system is distinguished by conscious, logical thinking. Characterized by unconscious processes and creativity, the associationistic conceptual system, differs even more from the other systems and "consists of an altered state of consciousness" (p.10). The system reveals itself in dreams and states of delirium, when cortical control is reduced. The systems overlap, and as a result, "the rational system can become aware of the content in the other systems." Additionally, "it is possible for individuals to coordinate the three systems (p. 10)." Epstein (1989) asserts the three conceptual systems can be a source of conflict and stress if there is a lack of integration.

It is important to note that Epstein (1989) maintains the idea that people "often consciously identify themselves with their rational conceptual system" since it is the system that makes sense to them because it is "rational" (p. 10). Seemingly, individuals have a tendency to be unaware of the impact of how their behavior is determined by their experiential conceptual system that operates automatically behind consciousness. Behavior "is far more often determined

by what ‘feels’ right and is therefore determined by motives in the experiential conceptual system” (Epstein, 1989, p. 10).

CEST, being a personal theory of reality, involves fundamentals that assume repetitive behavior patterns and from emotions (Epstein, 1989). While a single example of behavior is usually determined mostly by situational influences, by cumulatively observing behavior over many situations and occasions, a specific situational influence can be cancelled out, and broad, stable dispositions detected (Epstein, 1989). Some implicit beliefs in a personal theory of reality are specific to certain types of situations and can only be summarized “within an appropriately narrow range of stimulus variation that is confined to the class of stimuli over which one wishes to generalize” (Epstein & O’Brien, 1985, p. 11).

Epstein (1989) describes values in the experiential conceptual system as whatever is significant to an individual which will, in turn, be valued by the individual. The values may be either negative or positive and are believed to exist in all human beings because they build from common biological constructs and general living conditions. As a result, individuals have pleasure and pain centers and experience grief when they cannot understand their experience. All individuals are also cared for by parent figures and nurtured in social groups which ultimately cultivate a need for “belonging or relatedness” (Epstein, 1989, p.15).

Values within CEST are present at two levels: a conscious, verbal level and a subconscious, experiential level. On both levels, the values can differ in substance and degree since they function by different rules. Epstein (1989) asserts whatever is of value of significance to a person will be valued by a person whether it is positive or negative. Four basic functions of a personal theory of reality create four basic values which many assume to be present in all human beings because they develop from common biological arrangements and common living

conditions. According to Epstein (1989), all individuals implicitly value (a) maximizing pleasure and minimizing pain; (b) assimilating the data of reality, which requires maintaining stability and coherence of conceptual systems; (c) belonging or relatedness; and (d) positive self-evaluation.

With respect to theory, these values accomplish two things: they provide a basis for a hierarchical organization of values and indicate whether an important value has been ignored when accounting for a particular behavior. Seemingly, individuals have a tendency to be unaware of the impact of how their behavior is determined by their experiential conceptual systems that operates automatically behind consciousness. Epstein (1989) asserts behavior is far more often determined by what feels right and is therefore determined by motives in the experiential conceptual system. With this assertion this paper posits:

RQ7: How do broadcast news stories about military operations in Iraq featuring footage of U.S. versus Iraqi combat differ in how they are processed by viewers?

Emotion and Visuals.

Strivers (1994) believed visual images appeal to human beings on an emotions level and posited the more vibrant, excited, or convincing an image is, the more likely it will affect an individual. These theories suggest seeing visuals of actual combat could affect people on a deeper level than just text or photos alone because these visuals are processed differently than other media, and they are more convincing because it is sometimes real-time images of combat operations in Iraq.

As Epstein's CEST work suggests, the emotionality associated with the experiential mode may have important human adaptive functions that supplement our orderly, logical processes (Singer & Singer, 2005). The experiential system involves the accumulation of concrete experiences (episodic memories) into tentative, emotionally nuanced story-like

generalizations or models of one's life situation or of the world. Roeh (1989) claims the "romantic and melodramatic storytelling" (Roeh, p. 168) of journalism uses television news as a vehicle for conveying emotion over information (Roeh, p. 168).

It is widely recognized that emotion has an important function in the process of cognition and behavior (Clore & Ortony, 2000). Research shows attention, perception, memory, and decision making are all affected by emotion (Cacioppo & Gardner, 1999). Steinfatt and Roberts' (1983) research has also linked emotion to the interpretation of messages produced by the media. An increasing number of studies have shown that viewers use both verbal content and nonverbal cues to process and interpret messages viewed in the media (Reeves & Nass, 1996).

Specifically, Newhagen and Reeves (1992) posit compelling negative images, such as images of war, affect memory, both quality and quantity, differently than verbal information. Newhagen and Reeves (1992) argue compelling negative images "retroactively *inhibit* memory for material that precedes them while they proactively *enhance* memory for material that follows them" (p. 25). Further, Nabi (2003) states "pictures have an unquestioned capacity to arouse emotions, and such arousal might influence attitudes directly or indirectly by impacting message processing" (p. 202). Nabi (2003) posits audiovisual redundancy is imperative to improve learning and recall, but "the placement of emotionally evocative visuals may be even more critical" (p. 203).

Research in neuroscience and cognitive psychology has shown "emotional arousal can shape cognition without an individual being aware of the process" (Zhou, 2005, p. 26). Further, emotion theory posits that as evaluators, people assess all stimuli "with respect to their personal relevance and significance" (Zhou, 2005, p. 26). Television brings another dimension to images

that photographs cannot. Television brings sound and movement to the senses bringing about different emotions than print media does.

The dimensional theory of emotion posits that all emotions are located in a two-dimensional space of valence and arousal (Ravaja, 2004). Ravaja (2004) states “the valence dimension refers to the hedonic quality or pleasantness of an affective experience,” and the arousal dimension “refers to the level of activation associated with the emotional response” (Ravaja, 2004, p. 109). The systems of CEST, both the rational and experiential, can work together to produce significant behavior. Much like the dimensional theory, they arouse great emotion. According to CEST, imagined experience is similar to real experience in a person’s experiential (intuitive) mode of information processing. In other words, visualized experience is similar to real experience in people’s intuitive-experiential system but not in their analytical-rational system (Epstein & Pacini, 2001).

Visuals can have a dramatic impact on a viewer’s involvement and feelings toward an event or issue. Newhagen and Reeves (1992) found the increased cognitive load, caused by negative arousal raised by intense and vivid images on television, actually caused viewers to forget the verbal and visual information presented prior to the image and heightened their memory for visual and factual information presented after the compelling images.

Television has been considered more emotionally arousing than print media (Cho, Boyle, Keum, Shevy, McLeod, Shah, & Pan, 2003). Cho et al. (2003) state television gives viewers a “sense of presence” through the vivid images using technological features (as seen in zoom, slow motion, and sound) that television conveys (p. 312). The distinct norms and patterns of broadcast news production “leads to greater emotionality in tone and verbal expressions in news coverage,

which in turn, can elicit more emotional reaction from an audience attempting to make sense out of news coverage” (Cho et al., 2003, pp. 312-313).

In concert with the technological features of television discussed above, Cho et al. (2003) argue that emotional storytelling in television (including tone, emotional cues, and verbal expression), “is a crucial feature of television news that can elicit emotional responses” (p. 313). Therefore, emotional language can be characterized as a “distinct dimension of content features of television messages as compared to print media” (Cho et al., 2003, p. 313).

The intellectual impact of imagery is less important than the emotional force of an image, since imagery affects a receiver emotionally before cognitively dissecting the image into intellectual components (Strivers, 1994). This influence is precisely what news producers are aiming at since “the image is intended to make an impression, to have an emotion impact on its audience” (Strivers, 1994, p. 132). Unlike photographs portraying political leaders or scenic landscapes, images of military combat operations evoke some type of feeling. Hence, this study posits:

H1: Broadcast news stories about military operations in Iraq featuring footage of combat elicit more negative affective responses in viewers than stories featuring footage of Iraqi combat.

H2: Broadcast news stories about military operations in Iraq featuring footage of combat are processed more experientially by viewers than stories without footage of combat.

Graber (1987) states, people trust what they see more than what they hear. They gain a sense of actually witnessing an event when they see it presented in pictures. The perceived realism of visuals lends them credibility. Seeing is, indeed, believing (Graber, 1987). If news coverage is more believable, it should exert more influence on people’s attitudes than text. This

study examined the impact of broadcast news stories about military operations in Iraq by comparing those with footage of U.S. combat, footage of Iraqi combat, and stories without footage on viewers' affect and attitudes about continued U.S. military presence in Iraq. The study posits the following hypothesis:

H3: Broadcast news stories about military operations in Iraq featuring footage of combat exert greater negative influence on viewers' support for continued U.S. military presence in Iraq more than stories without footage of combat.

Antidote to the Impact of War Coverage

While Americans have been exposed to images of their war dead since Mathew Brady published his first photographs during the Civil War (Library of Congress Web site, 2006), it was only during the Vietnam War (McLaughlin, 2001) that they were first presented with large amounts of films and video, full-color motion pictures that created a sense of immediacy and reality, and whose emotional impact was immensely more powerful than that of the still, mostly black-and-white images they had been exposed to in the past. Almost ubiquitous broadcast media practitioners ranged freely throughout the war zone gathering images of American and enemy casualties, and, increasingly as the war dragged on, of the sufferings of the Vietnamese civilian population. Free of official military or civilian censorship, and no longer bound by the informal rules of self-censorship that media regularly followed in previous wars, they transmitted their images daily back home where the American public was bombarded with them right in their own living rooms.

The question now arises as to whether a similar outpouring of video images of casualties – American and Iraqi – might not in time erode the American public's support for the ongoing struggle against the insurgency in Iraq. To a certain extent, this study is built on a similar

previous study involving still news photographs (Pfau et al., 2005). This study investigates whether it is possible to preempt the persuasive influence of news video of combat operations using the approach called inoculation.

Developed in the early 1960s during the post-Korean War era by psychologist William McGuire, the inoculation theory provides individuals with means to resist persuasion and used the term inoculation (immunization) to describe the process. This theory does not deal with change of attitude, per se, but the processes through which one may resist attitude change attempts in interpersonal interaction or through mass media.

The theory explains that if one is presented with weak arguments against an individual's beliefs, one will be able to fight off that attack and subsequent attacks. If beliefs should be attacked, the individual will develop or bolster its immune system, which contains arguments and strategies to counter future attacks on attitudes. Similar to when an individual receives the smallpox vaccine, the body develops resistance to the virus itself.

McGuire and Papageorgis's (1961) introduced the medical analogy of inoculation to the study of resistance to persuasion, specifically in forced exposure situations. The authors discuss how best to protect a person from a physical disease. They set forth a "supportive therapy" of exercise, rest, nutrition, etc., to make them physically stronger, or by infecting them with a weakened version of a virus. This causes the body to generate antibodies to fight off the deadly virus itself. They applied this analogy to the area of resistance to persuasion.

McGuire (1961) expanded on the study of specific inoculation techniques by testing whether passive or active or passive defense – or a combination– were more efficacious in helping individuals defend their beliefs against subsequent attacks. The study found when one defense technique was used the passive defense conferred more immunity, but the active defense

worked better against novel counterarguments. Use of both techniques together was more effective only when subsequent attack involved the same counterarguments. Against novel counterarguments, the single defense was as effective as the double defense. Threat serves as a 'motivational trigger' in the inoculation process (Pfau, 1997).

Specifically, "threat motivates the receiver to bolster attitudes, unleashing an internal process" (Pfau, 1997, p.137). On the other hand, Pfau (1997) states "refutational preemption involves the process of initially raising and then answering one or more specific challenges to existing attitudes' and that 'the two components, threat and refutational preemption, work in tandem. First, threat and then refutational preemption" (Pfau, 1997, p.137). Threat motivates the receiver to defend against potential attacks rather than rehearsing for specific arguments and rendering themselves defenseless against different arguments that might be encountered. Inoculation spreads a "blanket of protection" over the receiver against a wide array of potential counterarguments rather than merely providing limited resistance to specific attack messages (Pfau, 1997; Pfau & Kenski, 1990).

A previous investigation conducted by Pfau et al (2005) made a theoretical case that print news photographs influence readers. Compared to text alone, news photographs of the casualties of war elicit powerful negative emotional responses. Because they compel attention and are processed quickly, yet deeply, they undermine overall attitudes in support of continued presence of U.S. military in Iraq.

The study (Pfau, et al 2005) predicted that print news photographs of the casualties of war trigger strong emotional responses in readers. Pfau et al (2005) also said that the underlying rationale for this expectation is that news photographs are processed using more of the right brain, which is more holistic and emotional, enhancing the process and memorability of the

images. Due to the vivid nature of images, photographs compel interest and attention which evokes an emotional response, which supports one of their main hypotheses. This study attempts to expand on the previous study to determine if inoculation can protect against the impact of broadcast images depicting images of war. In addition, this study predicts:

H4: Inoculation pretreatments reduce the negative affective and attitudinal influences of broadcast news stories about military operations in Iraq featuring footage of combat.

The previous study by Pfau and colleagues (2005) found that the result of the investigation suggest that news stories of casualties of war conveyed via photographs are emotionally compelling. The results are consistent with findings drawn from commercial advertising images that impact receivers emotionally, even before they engage the cognitively. “The results of the previous investigation suggest that images of the casualties of war stir negative emotions, but we concede that more research is needed to further document the emotional effects of print news photographs” (Pfau, 2005, p.29).

The results of the study also suggest that stories of casualties of war conveyed via photographs with caption elicit greater negative affect. Also, vividness implies that photographs of the casualties of war should exert greater emotional impact when presented with minimal narrative. Pictorial content is raw; it involves instinct and emotion, bypassing logic.

Pictorial content asserts boldly, absent more rational considerations. By contrast, text dampens negative emotions through its emphasis in reasoning, explanation, qualification, and nuance. Compared to images, text consist in linguistic arguments, which people are trained to resist; whereas images bypass natural defenses and are based in internal counterarguing.

The results of the investigation by Pfau and his colleagues (2005) also posited that news photographs of the casualties of war influence readers’ attitudes about the desirability of war,

and it offered a number of theoretical rationales for this prediction. The study also argues news photographs compel interest and attention in readers because they are vivid. That same research argued that news photographs draw readers' attention that text alone cannot. Predicting that:

H5 Compared to print inoculation messages, print plus visual inoculation pretreatments are more effective in reducing the negative affective and attitudinal influence of broadcast news stories about military operations in Iraq featuring footage of combat.

Methods

This study had three purposes. The first purpose of this study was to examine broadcast news visuals of war by specifically employing a content analysis to determine the overall tone of war coverage, and to describe what is covered in television news about the war in Iraq. In addition, an experiment was conducted to examine the impact of broadcast news footage of combat. Finally, to see if inoculation is an effective antidote to the impact of news footage of combat.

Content Analysis Methods

Procedures

A content analysis was conducted of network television newscasts from March 26, 2004 – March 12, 2006. The analysis focused on the national evening newscasts relating to military operations broadcasted on ABC, CBS, and NBC. The news reports were provided by Vanderbilt University Television Archive. The entire 30-minute news broadcasts were analyzed in the 5:30 to 6:00 PM (CST) time slot. The 2004 date was chosen because it was roughly one year from April 9, 2003, when reporters started using the phrase, “The Fall of Baghdad.” It symbolized the fall of the statue of Saddam Hussein and was considered to be the end of the invasion phase of the war. The dates continued until March 12, 2006, almost three years after the start of the war.

Only one broadcast was analyzed for each day. A purposive sample was determined by counting three and five days back from when the public opinion poll was taken. This represented a total of 92 days of television newscast.

To help justify the dates for the study, public opinion data was gathered from a number of polling institutes which included: Gallup Organization, Zogby America Poll, NBC/Wall Street Journal, CBS News/New York Times Poll, ABC News/Washington Post Poll, and National Annenberg Election Survey. Each of these polls asked a question very similar to the following question: “All in all, do you think it was worth going to war in Iraq, or not?” This question was chosen because it provided some insight into the U.S. public’s perception of the war and, to some extent, the progression of the war. Publicly available polls conducted during the time frame were utilized. A total of 47 public opinion polls from March 2004 until March 2006 were used. The polls were used to stratify the dates used in the content analysis.

The broadcast unit of analysis was each single report by a broadcast journalist about a person, unit, or event with a clear beginning, middle, and end. A unit of analysis ($N = 146$) commenced with the anchor introducing a story and then either turning to a reporter or showing video of Operation Iraqi Freedom while the anchor reported in support of the video. The ending of each unit of analysis was defined as when a journalist “signed off” (“John Smith, CNN, Fallujah”), or the anchor clearly displayed that the story was over.

Coding

Six coders were trained to perform the content analysis. Coding norms were established during a supervised training session. Coders viewed 10% of newscasts. During training, coders established a high degree of standardization resulting in effective inter-coder reliabilities of $R =$

.98 (Rosenthal 1984, 1987). Holsti's (1969) method was used to examine inter-coder reliabilities on the nominal level data. Coders had a reliability of .95.

Overall tone of coverage was assessed with a global attitude measure adapted from Burgoon, Cohen, Miller and Montgomery (1978). It consisted of six 7-interval scales, including: good/bad, positive/negative, wise/foolish, valuable/worthless, favorable/unfavorable, and acceptable/unacceptable ($\alpha = 1.0$, $N = 146$). The extent to which a broadcast embodied opinion was also assessed using a single-item indicator. The 7-interval scale ranges from opinion/interpretation (a fair and balanced news story).

The extent to which each unit employed framing was measured with a single 7-interval scale, episodic/thematic. The scale was used previously by Pfau (2004).

The news stories were coded for content focus according to the percent of the story devoted to the topic (0 –100%). Topics coded included: U.S. money spent in Iraq, megawatt hours, oil production, effectiveness of Iraqi forces, effectiveness of U.S. forces, Iraqi forces combat casualties, U.S. forces combat casualties, political instability, the prospect of democracy, public opinion ratings about the war in Iraq, Fallen Hero stories, or U.S. troops wounded in combat.

To examine the coverage of casualties, some questions were asked using nominal level scales. One question coded asked what specific casualties were discussed in each story (e.g., U.S. military casualties, Iraqi civilian casualties, insurgent casualties, Iraqi forces casualties, or other). The cause of casualties was also coded (e.g., road side bomb, gun fire, accident, or other). The broadcast news stories were also coded for discussion of wounded (e. g., U.S. military casualties, Iraqi civilian casualties, insurgent casualties, Iraqi forces casualties, or other). The possibility of the news story discussing the total number of deaths or wounded was also coded.

Experimental Methods

To examine the impact of broadcast news footage of combat and to assess the efficacy of inoculation in deflecting this impact, an experiment was conducted.

Topic Selection

The investigation employed broadcast news stories discussing casualties of war. Specifically, the news stories featured reports of casualties without footage and reports of combat with footage involving U.S. forces, Iraqi forces, and Iraqi civilians. Broadcast news stories were selected from CBS evening news.

Participants

Participants were recruited from introductory communication classes at a midwestern university. A total of ($N = 146$) research participants completed both phases of the study (a retention rate from Phase 1 of 97%). Participant involvement with the issue (e.g. low, medium, and high) was used to randomly place participants in one of three casualty categories and into either an inoculation treatment or control group.

Design and Independent Variables

One part of the study featured a 2 x 3 Multi Variable Analysis of Covariance (MANCOVA) to examine the hypotheses and research questions. Independent variables were news condition, which was operationalized as a broadcast news story of combat operations in Iraq featuring a news report with footage of combat operations and without accompanying footage. Topic was operationalized as the focus of the story involving U.S. operations, Iraqi Operations, or Iraqi civilians. The second part was conducted on participants exposed to one of the news footage conditions. It featured a one-way MANCOVA to examine the efficacy of inoculation, operationalized as print inoculation or print inoculation with photograph. The

effectiveness of inoculation was assessed by comparing attitudes, elicited involvement, and elicited affect of inoculated participants. Reliability of all scales was gauged using Cronbach's coefficient alpha.

Receiver prior attitude, initial issue involvement, and gender were employed as covariants. Attitude toward the continued U.S. military presence in Iraq was assessed using six bipolar adjective pairs employed in recent inoculation research (Burgoon, Cohen, Miller & Montgomery, 1978). Adjective pairs included negative/positive, bad/good, unacceptable/acceptable, foolish/wise, wrong/right, and unfavorable/favorable. The reliability coefficient for prior attitude was $\alpha = .97$, $N = 143$. Issue involvement was operationalized as the importance or salience of continued U.S. military presence in Iraq and was assessed using a version of the Personal Involvement Inventory (PII) (Zaichkowsky, 1985). Six items of the PII were employed in this study to include: unimportant/important, of no concern/of much concern; means nothing/means a lot; doesn't matter/matters to me; insignificant/significant; and irrelevant/relevant. Reliability for the issue involvement scale was $\alpha = .95$, $N = 145$. Participant gender was operationalized as female and male.

Experimental Materials

The first part of the experiment attempted to assess the impact of broadcast news footage of combat. The broadcast news segments were 17 minutes in length, including commercials. Each segment contained one story specific to the casualty condition (U.S. military, Iraqi forces, Iraqi civilians). For example, the Iraqi civilian condition included a CBS evening newscast. The newscast was edited down to 17 minutes from the original 30 minutes. The newscast included a story (or package) about Iraqi civilian casualties. The package was 2:00 minutes in length. These same procedures were employed for each of the other two combat conditions. The packages

discussing casualties with photos all featured the same reporter. The control package did not depict casualties. It only employed audio from the anchor discussing casualties, but no video showing specifics. There was a total of four newscasts. One newscast was employed for each of the three casualty conditions, and then the control video.

The second part of the experiment featured inoculation. The inoculation message was a generic preemption against the influence of visual images in forming personal opinion. The inoculation messages had a word count of 360 words. One inoculation message asked participants to examine a color photo of civilian casualties. The text of the inoculation messages was the same. The only difference between the inoculation messages was one referred participants to examine an attached still, color photo; the other did not contain a photo.

Because inoculation theory posits that threat is a motivating catalyst in resistance, the first paragraph of the inoculation message was designed to elicit threat. Threat was operationalized as a warning of an impending news story featuring potentially influential pictures. The remainder of the inoculation message raised arguments that warned of the impact of visual imagery on their position.

Procedure

The study was conducted in two phases. Phase 1 and 2 experimental booklets were prepared for participants. During Phase 1, demographic information was collected on research participants to include, name, gender, age, and year in school. Additionally, an exposure and attention measure of TV news use was collected.

Phase 1 was conducted over a period of 5 days. Participants were randomly assigned to one of the cells in the design: news condition (footage or no footage) and topic (U.S. forces, Iraqi forces, and Iraqi civilians). Those assigned to the news condition footage cell were assigned to

one of three inoculation conditions (print, print plus photograph, and control). Subjects were assigned randomly with the exception that care was taken to ensure conditions were relatively balanced in regards to initial involvement. Additionally, inoculation cells were assigned more subjects than control cells (2:1 ratio). Also, care was taken to balance across the two types of inoculation treatments (one with message, the other with a message and a still photo). Phase 1 booklets contained an inoculation message warning against the impact of visual imagery on their opinions or a control message, a questionnaire that assessed the number of days participants spent watching TV news, and measure of threat, counter-arguing, involvement in Iraq, and attitude about U.S. military operations in Iraq.

One week later, over a period of five days, research participants were given the Phase 2 questionnaire. First participants went to the video lab to watch a video. The video was a 17-minute newscast. The newscasts were similar; however each newscast contained a 2:00 package about casualties. Participants either saw the news story without images of combat or the story with images of combat. After viewing the broadcast newscast, research participants completed a questionnaire. The questionnaire assessed attitude toward the continued U.S. military presence in Iraq, emotional response to the story, experiential and rational processing of the story, involvement, and counterarguing.

Dependent Measures

Research participant attitude about combined U.S. military presence in Iraq war was assessed using six bipolar adjective pairs developed for use in resistance research by Burgoon and colleagues (1978). Adjective opposite pairs were: unacceptable/acceptable, foolish/wise, unfavorable/favorable, negative/positive, bad/good, and wrong/right. Alpha reliability of the attitude scale was $\alpha = 1.0$.

Threat elicited by the inoculation treatment was measured using six bipolar adjective pairs employed in all recent inoculation studies. It was assessed in Phase 1, following administration of the inoculation treatment. A six-point scale consisting of bipolar adjective pairs was used to evaluate perceived threat against the person's thoughts regarding the possibility of persuasive counterarguments influencing their position on the continued presence of the U.S. military in Iraq (perceived threat). Adjective pairings consisted of; not dangerous/dangerous, non-threatening/threatening, calm/anxious, not scare/scary, not harmful/harmful, and not risky/risky.

A thought-listing technique (Brock, 1967; Greenwald, 1968) was used to establish potential arguments against their position regarding the U.S. military presence in Iraq and subsequent responses to these potential arguments. After completing their list, subjects were asked to rate their arguments on a 1 (weak) to 7 (strong)-point scale, and then rate their thoughts and feelings on the responses to these arguments from 1 (weak) to 7 (strong). Lastly, the importance of continued U.S. military presence and involvement in Iraq was studied again using a six-point bipolar adjective scale (Zaichkowsky, 1985). The scale included; unimportant/important, no concern/of much concern, means nothing/means a lot, doesn't matter/matters to me, insignificant/significant, and irrelevant/relevant.

During Phase 2, participants were asked to complete an open-ended measure on which they identified possible arguments contrary to their own position and then listed potential responses to those arguments in the spaces provided. The procedure is based on the thought-listing technique pioneered by Brock (1967) and Greenwald (1968). However, past use of this technique alone has proven to be inadequate in inoculation research (Pfau et al., 1997). Eagly and Chaiken (1993) have argued that thought-listing does not reflect the amount of cognitive

effort expended. In addition, thought listing, by itself, fails to acknowledge the prospect that respondents may view their own thoughts as varying in power and intensity, both in cognitive and affective terms. Therefore, after generating their list of arguments contrary to their position and responses to those arguments, respondents rated perceived strength of arguments contrary to their position and strength of responses using a 1 to 7-point scale.

Multiple item indicators were used to evaluate emotion. The emotion scale was based on the previous work of Dillard and colleagues (Dillard, Plotnick, Godbold, Freimuth & Edgar, 1996; Smith & Dillard, 1997). Featured emotions included anger (angry, irritated, and annoyed) $\alpha = .79$, surprise (surprise, astonished, and amazed) $\alpha = .81$, puzzled (puzzled, bewildered and confused) $\alpha = .85$, sad (sad, dreary, and dismal) $\alpha = .79$, fear (fearful, afraid, and scared) $\alpha = .90$, and pride (dignity, honor, and gratification) $\alpha = .80$. The category of pride is added to this scale for the purpose of this particular study.

Task specific experiential and rational cognition were also measured.

There were 13 items that asked participants how the news story made them feel, the scale had $\alpha = .91$. Those items were: the story made them sad, they felt comfortable with the story, they felt fearful, they felt good, they were disgusted, they angry, they felt joyful, unpleasant, happiness, bad, uncomfortable, and/or felt agitated.

Items on the next scale were included on two different dimensions, experiential and rational. Experiential items reached an $\alpha = .81$ and included: use of instincts, using the heart as a guide for reactions, feelings, intuition, use of hunches to make decisions, gut feelings, use of free association, flashes of insight, first impressions, and ideas “popped” on the subjects head. The rational processing items reached an $\alpha = .77$ and include: reasoning, analytical assessment, systematical judgments, focus on steps to process the story, use of rules, awareness of mental

process, focus on task before arriving to judgment, and careful use of information in order to arrive to conclusions.

The task specific scale items are as follows. There were 18 items used to make the student reflect on the process of watching the news cast. "I reasoned things out carefully." "I used my instincts." "I approached and assessed the news story analytically." "I used my heart as a guide for my reactions." "I assessed and judged the news story systematically." "I went by what felt good to me." "I was very focused on the steps involved in judging the video." "I relied on my sense of intuition." "I trusted my hunches." "I used clear rules." "I was very aware of my thinking process." "I used my gut feelings." "I was very focused on what I was doing to arrive at my judgment." "I used free-association, where one idea leads to the next." "I had flashes of insight." "I relied on my first impressions." "Ideas just popped into my head." "I arrived at my assessments by carefully assessing the information in front of me." (Novak & Hoffman, 2005).

Research participant attitude about combined U.S. military presence in Iraq was assessed using six bipolar adjective pairs developed for use in resistance research by Burgoon and colleagues (1978). Adjective opposite pairs were: unacceptable/acceptable, foolish/wise, unfavorable/favorable, negative/positive, bad/good, and wrong and right. Alpha reliability of the attitude scale was $\alpha = .97$.

Lastly, the importance of continued U.S. military presence and involvement in Iraq was studied again using a six-point bipolar adjective scale (Zaichkowsky, 1985). The final issue involvement scale's $\alpha = .94$. The scale included the following items: unimportant/important, of no concern/of much concern, means nothing/means a lot, does not matter, matters to me, insignificant/significant, and irrelevant/relevant.

Results

The purpose of this study was to examine the impact of broadcast news visuals of war. Specifically, it employed a content analysis to determine the overall tone of war coverage to describe what is covered in television news about the war in Iraq. In addition, it features an experiment to determine the impact of combat footage on viewers. Finally, it examines whether inoculation can protect viewers' attitudes from the impact of broadcast news footage.

Descriptive Statistics

Research Question 1 examined the content of broadcast news coverage about Iraq. To examine this research question, the dates were broken down into three equal time frames. The first time period was the time period from January to July 2004. The second time period was October 2004 through June 2005, and the last time period was from July 2005 through March 2006. The coding categories were collapsed into five specific content focuses: progress in Iraq, the number of casualties, casualty personality, U.S. politics, and Iraqi politics. Table 1 indicates the proportion of coverage devoted to each content area across the three time intervals.

There was little coverage of progress in Iraq, which never exceeded 2% of coverage of Iraq. Progress in Iraq was covered slightly more often between October 2004 through June 2005 ($M = 1.28$; $s.d. = 4.54$ _{Time 2}; $M = 1.11$; $s.d. = 4.90$ _{Time 3}; $M = 1.06$; $s.d. = 4.50$ _{Time 1}). Coverage of casualties was more frequent, especially after Summer 2004. The number of casualties was discussed most frequently between July 2005 and March 2006 ($M = 10.89$; $s.d. = 13.94$ _{Time 3}; $M = 7.27$; $s.d. = 11.03$ _{Time 2}; $M = 6.90$; $s.d. = 10.96$ _{Time 1}). Casualty personality (e.g., Fallen Heroes stories) was discussed frequently between October 2004 through June 2005 ($M = 13.41$; $s.d. = 22.20$ _{Time 2}; $M = 11.67$; $s.d. = 21.51$ _{Time 3}; $M = 6.94$; $s.d. = 17.41$ _{Time 1}). U.S. politics were not the

focus of much coverage. U.S. politics regarding the war in Iraq was discussed most frequently from July 2005 through March 2006 ($M = 2.22$; $s.d. = 8.46$ _{Time 3}; $M = 1.90$; $s.d. = 6.73$ _{Time 2}; $M = 1.89$; $s.d. = 7.69$ _{Time 1}). However, Iraqi politics was much more a focus of coverage, especially in the first phase from January to July 2004. Iraqi politics was discussed most frequently from January to July 2004 ($M = 15.69$; $s.d. = 19.62$ _{Time 1}; $M = 12.44$; $s.d. = 15.47$ _{Time 2}; $M = 12.25$; $s.d. = 17.98$ _{Time 3}).

Research Question 2 asked how objective news stories about Iraq were over time. Overall, coverage was fairly neutral or balanced with few differences across time. More opinionated news coverage about the war in Iraq appeared during October 2004 through June 2005 ($M = 4.56$; $s.d. = 1.98$ _{Time 2}; $M = 4.67$; $s.d. = 2.23$ _{Time 3}; $M = 4.83$; $s.d. = 1.53$ _{Time 1}).

Research Question 3 asked what the overall tone was of broadcast news coverage about the war in Iraq. On balance, tone of coverage was neutral. Tone of coverage became more positive from Time 1 to Time 2 and then leveled off ($M = 4.61$; $s.d. = 1.06$ _{Time 2}; $M = 4.57$; $s.d. = 1.55$ _{Time 3}; $M = 4.17$; $s.d. = .99$ _{Time 1}). A Scheffe post-hoc test revealed that there was a significant change in tone from Time 1 to Time 2, $t(114)4.11$, $p < .01$.

Research Question 4 asked about the frequency of casualties featured in broadcast news coverage about the war in Iraq. Forty-four percent of the broadcast news stories coded depicted U.S. military casualties. Forty percent of the stories depicted Iraqi civilian casualties. Wounded Iraqi civilians were covered most frequently (53.6%) followed by wounded U.S. military (35.7%).

Research Question 5 asked if public opinion was also discussed when featuring reports about U.S. casualties about the war in Iraq included in the stories. Overall, coverage did not

stress public opinion. Indeed, the only period it was emphasized was during October 2004 through June 2005 ($M = 5.11$; $s.d. = 19.86$).

Research Question 6 asked what type of frame would be employed when discussing military operations in Iraq. Framing was measured using a scale from 1 to 7 (Pfau, et al., 2004). Overall, broadcast news stories employed a slightly more thematic frame ($M = 3.82$; $s.d. = 2.21$ Time 2; $M = 3.61$; $s.d. = 1.76$ Time 1; $M = 3.30$; $s.d. = 2.37$ Time 3). Broadcast news stories were somewhat less thematic at Time 2 between October 2004 and June 2005.

Experiment Results

To assess Research Question 7 and Hypothesis 1, a one-way MANCOVA was computed for the independent variables of casualties (U.S. or Iraqi) and the dependent variables of post-attitude, post-issue involvement, emotional response, experiential processing, and rational processing, as well as the emotions anger, puzzlement, sadness, fear, and pride. Two covariates (initial attitude and sex) were also employed in this analysis. An omnibus test revealed significant differences for the covariate initial attitude Wilks' $\lambda F_{1,129} = 51.09$, $p < .001$, partial $\eta^2 .81$.

Subsequent univariate tests indicated significant effects for initial attitude on the dependent variables post attitude $F_{(1, 129)} = 571.11$, $p < 001$, partial $\eta^2 .80$; post-issue involvement $F_{(1, 129)} = 90.10$, $p < 001$, partial $\eta^2 .39$; emotional response $F_{(1, 129)} = 21.98$, $p < 001$, partial $\eta^2 .14$; anger $F_{(1, 129)} = 13.05$, $p < 001$, partial $\eta^2 .09$; puzzlement $F_{(1, 129)} = 7.41$, $p < 01$, partial $\eta^2 .05$; sadness $F_{(1, 129)} = 14.19$, $p < 001$, partial $\eta^2 .09$; and pride $F_{(1, 129)} = 36.44$, $p < 001$, partial $\eta^2 .21$. For initial attitude toward continued U.S. military presence in Iraq and elicited pride, the betas were positive, indicating that stronger initial attitudes were related to greater pride. Also, initial attitude was positively related to post-issue involvement.

Betas were negative when examining initial attitude and the emotions anger, puzzlement, sadness, and emotional responses, indicating that those with a more positive attitude were less likely to experience negative emotions or emotional responses to broadcast news coverage.

Omnibus tests also revealed significant differences for the covariate sex on the dependent variables emotional response $F(1, 129) = 8.86, p < .01, \text{partial } \eta^2 .06$; puzzlement $F(1, 129) = 8.90, p < .01, \text{partial } \eta^2 .06$; sadness $F(1, 129) = 6.70, p < .05, \text{partial } \eta^2 .05$; and fear $F(1, 129) = 15.98, p < .001, \text{partial } \eta^2 .10$. All betas were positive, indicating broadcast news coverage about the war in Iraq elicited more emotion from females.

Research Question 7 asked how broadcast news stories about U.S. versus Iraqi combat news stories were processed differently. Table 3 depicts a pattern of means that demonstrates that the focus on U.S. versus Iraqi combat resulted in little differences in how one processes television news stories.

Hypothesis 1 predicted that stories with footage of U.S. combat would elicit more negative affect than stories of Iraqi combat. There was no significant main effect for casualty focus. An omnibus test revealed no significant differences for the independent variable of the casualty condition Wilks' $\lambda F_{1,129} = 1.45, p = 1.61, \text{partial } \eta^2 .11$. Therefore, Hypothesis 1 was not supported.

To examine Hypothesis 2 and 3 a 2 x 2 MANCOVA was computed with the independent variables of participant sex (male or female) and visual condition (no picture of casualties or picture of casualties) and the dependent variables post-attitude, post-issue involvement, emotional response, experiential processing, and rational processing, as well as the emotions anger, puzzlement, sadness, fear, and pride. An omnibus test revealed significant differences for the covariate initial attitude Wilks' $\lambda F_{1,129} = 49.29, p < .001, \text{partial } \eta^2 .81$. Subsequent

univariate tests revealed significant differences for the covariate initial attitude and the dependent variables post-attitude $F(1, 129) = 555.22, p < 001$, partial $\eta^2 .80$; post-issue involvement $F(1, 129) = 89.55, p < 001$, partial $\eta^2 .39$; emotional responses $F(1, 129) = 22.04, p < 001$, partial $\eta^2 .14$; anger $F(1, 129) = 12.57, p < 01$, partial $\eta^2 .08$; puzzlement $F(1, 129) = 6.72, p < 05$, partial $\eta^2 .05$; sadness $F(1, 129) = 13.86, p < 001$, partial $\eta^2 .09$; and pride $F(1, 129) = 35.83, p < 001$, partial $\eta^2 .21$. For initial attitude toward continued U.S. military presence in Iraq and elicited pride, the betas were positive, indicating that stronger initial attitudes were related to more positive subsequent attitudes and greater pride. Also, attitude was positively related to post-issue involvement. Betas were negative when examining initial attitudes and the emotions anger, puzzlement, sadness, and emotional responses, indicating that those with a more positive attitude were less likely to experience negative emotions or emotional responses to broadcast new coverage.

An omnibus test revealed significant differences for the independent variable participant's sex, Wilks' $\lambda F_{1,129} = 2.29, p < .05$, partial $\eta^2 .17$. Subsequent univariate tests revealed significant differences for the independent variable sex and the dependent variables emotional responses $F(1, 129) = 6.08, p < 05$, partial $\eta^2 .04$; experientially processing $F(1, 129) = 3.86, p < 05$, partial $\eta^2 .03$; and the emotions puzzlement $F(1, 129) = 7.30, p < 01$, partial $\eta^2 .05$; sadness $F(1, 129) = 5.90, p < 05$, partial $\eta^2 .04$; and fear $F(1, 129) = 15.66, p < 001$, partial $\eta^2 .10$. Examination of the pattern of means revealed that females processes television news stories with more emotional responses and more experiential processing. Table 4 illustrates the pattern of means.

Hypothesis 2 predicted that television news stories featuring visual footage of combat would be processed more experientially. The results failed to support this hypothesis. There was

no difference in processing for those viewing stories with visual footage of combat and those not seeing combat footage.

Hypothesis 3 posited that television news stories featuring visual footage of combat exert negative influence or attitudes about continued U.S. military presence in Iraq compared to stories without combat footage. There was no main effect for experimental condition. However, when theory posits a particular effect, subsequent planned comparison tests are warranted (Huberty & Morris, 1989). Planned comparisons of the two viewing conditions indicated that news stories with visual footage of combat significantly undermined support for continued U.S. military presence in Iraq compared to stories without footage of combat, $F(1, 138) = 16.76, p < .01, \eta^2 = .02$. This supports Hypothesis 1.

Hypothesis 5 predicted that inoculating with print messages plus photo would produce better effects than inoculating with only a print message. An omnibus test revealed significant differences for the covariate initial attitude, Wilks' $\lambda F_{11, 80} = 39.09, p < .001$, partial $\eta^2 .84$. Subsequent univariate tests revealed significant differences for the covariate initial attitude and the dependent variables post – attitude $F(1, 95) = 438.69, p < .001$, partial $\eta^2 .83$; emotional responses $F(1, 95) = 16.54, p < .001$, partial $\eta^2 .16$; and the emotions anger $F(1, 95) = 7.72, p < .01$, partial $\eta^2 .08$; sadness $F(1, 95) = 6.92, p < .05$, partial $\eta^2 .08$; and pride $F(1, 129) = 25.00, p < .001$, partial $\eta^2 .22$. For initial attitude toward continued U.S. military presence in Iraq and elicited pride, the betas were positive, indicating that stronger initial attitudes were related to more positive subsequent attitudes and greater pride. Betas were negative when examining initial attitudes and the emotions anger, sadness, and emotional responses, indicating that those with a more positive attitude were less likely to experience negative emotions or emotional responses to broadcast new coverage.

There were no main effects for the independent variables of inoculation condition or gender, therefore Hypothesis 5 was not supported.

Hypothesis 4 predicted that inoculation reduces negative affective and attitudinal influence. More data needs to be collected in the control condition to determine if this is actually true. Every participant who was inoculated also saw footage of casualties. Those in the current control condition did not see footage of casualties, only generic footage about the war in Iraq. The data to be collected will expose participants to the footage of casualties without inoculating them prior to seeing the television news broadcasts.

Discussion

There is no clear evidence that broadcast images of war affect public opinion; it has certainly been an underlying assumption. However, tangible evidence supporting such claims is scarce. Braestrup (1977) posited the utilization of television fundamentally changed war reporting during the era of the Vietnam Conflict.

This study examines 92 segments within three years of broadcast evening news coverage from three major television networks spanning a year after “The Fall of Baghdad.” The content analysis examined overall tone of coverage, use of objectivity, frames, and the depiction of U.S. and Iraqi casualties. Many suggest the weak support in public opinion is a direct result of negative media coverage; the results of this study show otherwise. This study demonstrated there is little coverage about public opinion tied to the war in Iraq, and the tone of coverage was slightly more positive over time. This study also examined the visual impact of combat operations, expanding on a study of print images by Pfau and colleagues (in press). Broadcast images are processed differently than print images; therefore, they tend to stir more emotion than print images due to their vivid nature (Strivers, 1994). This study posited that people would

process broadcast news stories more experientially and it compared the impact of television news stories about combat in Iraq by visual footage to stories without such footage. It found that news reports of combat operations elicit emotional responses in women viewers and stories accompanied by visual footage of combat undermines support for continued U.S. military progress in Iraq. Finally, this study tested whether it is possible to inoculate against the impact of broadcast news coverage.

Content Analysis

The content analysis was the first to empirically examine the actual content of television news reports featuring Iraq. It examined three years of coverage.

Research Question 1 examines the content of television news reports about Iraq. Different topics were discussed at different times. For example, progress in Iraq was covered slightly more often during the second timeframe of the study. Casualties were frequent after summer 2004. U.S. politics were not the focus of much coverage; however, it was discussed more frequently in the last timeframe of the study. Coverage of other topics has changed over time possibly as a result of limited embedded reporters. This further results in more thematic framing as opposed to episodic framing in nature.

Research Question 2 analyzed the degree of objectivity of broadcast news stories about military operations in Iraq. The results showed the coverage for U.S. military casualties and Iraqi casualties were the same. This suggests the carnage of war is not prejudicial in the perspective of viewers. Research Question 3 explored the overall tone of broadcast news coverage about the Iraq war. Contrary to the expectation that tone in coverage has been negative, results revealed that tone has become more positive after summer 2004 and then leveled off throughout the rest of 2004, all of 2005, and early 2006. The overall tone of coverage is best described as neutral.

In response to Research Question 4, 44% of broadcast news stories coded depicted U.S. military casualties while about the same percentage of stories depicted Iraqi casualties. Most frequently covered were wounded Iraqi casualties more than half the time. Wounded U.S. military were covered just over a third of the time.

The results of Research Question 5 revealed public opinion when featuring reports regarding U.S. casualties was not discussed much in news and feature reports about Iraq. When public opinion was covered, it was probably related to the U.S. election taking place in November 2004. The number of casualties was discussed most frequently from late 2005 to early 2006. There were more “Fallen Hero” stories from late 2004 to June 2005. There has also been less discussion about the Iraqi government since the beginning stages of the war.

Research Question 6 showed news coverage was deemed more thematic across time. It fell ranked near 4 on the 1 to 7 scale. There was less use of episodic news reports, which could be related to fewer embedded reporters. News reporters were not spending as much time with troops, which would lead to more background type reports.

Experiment

The experiment examined how people process broadcast news coverage. Hypothesis 1 predicted broadcast news stories about military operations in Iraq featuring footage of U.S. combat elicit more negative affective responses in viewers than stories featuring footage of Iraqi combat. This, too, proved to be false. There is no data to support a difference in emotional response to combat footage depicting U.S. and Iraqis. However, women, in general exhibited more emotions overall. This could suggest simply that women are more emotional than men when presented with visuals of combat. It is possible that women have a higher ability to empathize and therefore, women are able to feel more deeply the pain of those who have lost

loved ones as a result of war. Another possibility is that men are more detached from graphic images because of their inherent nature as hunter/gatherer/warrior. Consistent with the previous study (Pfau, et al., in press) women experienced more emotional responses to broadcast news stories depicting combat casualties than did men.

It also examined how the process of inoculation could be used to protect against the impact of combat visuals. Hypothesis 2 predicted broadcast news stories about military operations in Iraq featuring footage of combat are processed more experientially by viewers than stories without footage of combat. The results revealed that this is not the case. There was, in fact, little difference in processing of news stories about Iraqi casualties or U.S. casualties.

Hypothesis 3 predicted broadcast news stories about military operations in Iraq featuring footage of U.S. combat exert greater negative influence on viewers' support for continued U.S. military presence in Iraq more than stories without footage of combat. Results indicate broadcast news stories featuring combat footage about military operations does not affect individuals already having strong initial attitudes about the war in Iraq. Surprisingly, the converse is true. The stronger an individual's initial attitude about the war, the more pride they experienced and the more involved they become in the issue and the less likely the participant was to feel negative emotions such as anger, puzzlement, or sadness when viewing images of war casualties.

These results indicate (1) an individual's initial attitude will make them more positive toward the war and less likely to experience negative emotions. From a public affairs point of view this means the best time to secure support for military action when necessary is before the conflict begins. If positive attitudes are solidified prior to the start of the conflict there is less chance of a change in those attitudes taking place as a result of visual broadcast image exposure.

(2) There was no difference in how news stories were processed. The reason for this is unclear, though, it may be due to pre-existing positive attitudes about the war.

The research does support the position that broadcast stories featuring combat footage do affect viewer's attitudes toward the war. This is consistent with Nabi (2003) which states "pictures have an unquestioned capacity to arouse emotions and such arousal might influence attitudes directly or indirectly by impacting message processing" (p. 202). Participants viewing broadcast news stories containing video footage of casualties experienced a significant change in attitude and support for continued U.S. military presence in Iraq. Those who did not view the casualty footage were not similarly affected. Whether the casualties were U.S. military, Iraqi civilian, or Iraqi military did not matter. What this means is that a correlation does exist between visual images of war casualties and positive attitudes and support for the war. Regardless of the identity or national origin of those killed; death is death.

The impact of inoculation in this study is being suppressed because this study featured only controls for the message rather than controls for the visual images. Later data will be collected to gather control subjects who will be exposed to images of casualties; however, they will not be inoculated. Evidence suggests that inoculation will be effective. It is important to note there was no difference in the effects generated by print inoculation or print plus picture inoculation. This suggests that the information is processed similarly whether it is written or visual.

Limitations

Participants inoculated previewed the stories featuring casualties. The control condition in the current study is a true control group. They did not receive an inoculation message or view

any video of casualties. This limited the comparison of protecting against the impact of visuals because some participants who were not inoculated needed to view video of casualties as well.

This study edited together 4 different broadcast news stories. However, there is a lack of significantly gripping video that shows death in evening newscasts. Locating video clips of casualties that would meet broadcast news standards in the U.S. was challenging. There was an abundance of footage containing civilian casualties; however, footage of U.S. military casualties was scarce. This may be due to reporters respecting DoD policy on American families.

Future research in successfully inoculating men against the effects of visual images of war is still to be conducted. Previous findings revealed that inoculation is primarily effective on women and their attitudes about war (Pfau, et al., in press). Previous research shows that men experience significantly less emotional response than women to news stories about war casualties. The reasons for this are not known. Another potential area for research is conducting a study of the effects of visual images and support for the war on military personnel. Do visual images of war change the opinion and, possibly, dedication to duty of military members?

Conclusion

The impact of this study on DoD public affairs is significant because of the large number of embedded journalists involved in military combat operations. Images of war will continue to be broadcast and the effects these images will have on public opinion may have a substantial influence on continued occupation of Iraq and other countries in which America finds or responds to conflict. DoD public affairs specialists need to know how the media is affecting public opinion and what role they play in responding to queries and other public outcries as well as helping to maintain public support and reducing the amount of negative affect experienced by news viewers.

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Table 1

Change in Topic Across Time

	Time 1	Time 2	Time 3
<i>Dependent Variable</i>			
Progress	1.06 (4.49) (n = 72)	1.28 (4.54) (n = 43)	1.11 (4.90) (n = 30)
Number of Casualties	6.89 (10.96) (n = 72)	7.27 (11.03) (n = 43)	10.89 (13.94)* (n = 30)
Casualty Personality	6.94 (17.41)* (n = 72)	13.40 (22.20) (n = 43)	11.67 (21.51) (n = 30)
Iraqi Politics	15.69 (19.62) (n = 72)	12.44 (15.47) (n = 43)	12.25 (17.98) (n = 30)
U.S. Politics	1.90 (7.69) (n = 72)	1.89 (6.73) (n = 44)	2.22 (8.46) (n = 30)

Note: The means and standard deviations are depicted for the context of the broadcast news story. The story was coded from 0 to 100%.

*significant change over time

Table 2

Change in Tone, Frame, and Objectivity Across Time

	Time 1	Time 2	Time 3
<i>Dependent Variable</i>			
Overall Tone	4.17 (.99) (<i>n</i> = 72)	4.61 (1.06) ^a (<i>n</i> = 44)	4.57 (1.55) (<i>n</i> = 30)
Opinion	4.83 (1.53) (<i>n</i> = 72)	4.57 (1.98) (<i>n</i> = 44)	4.67 (2.23) (<i>n</i> = 30)
Framing (episodic)	3.61 (1.76) (<i>n</i> = 50)	3.82 (2.21) (<i>n</i> = 375)	3.30 (2.37) (<i>n</i> = 30)

Note: Tone of coverage was assessed using two scales: overall tone of coverage was assessed using six 7-interval scales. The extent to which a broadcast embodied objectivity was also assessed using a single-item indicator. The 7-interval scale ranges from opinion/interpretation (a fair and balanced news story). Framing was assessed using a single 7-interval scale that measured the story's placement on a thematic (1) vs. epic continuum (7).

^a significant compared to Time 1 at $p < .01$

Table 3

Comparison across topics

Condition	<i>Dependent Variables</i>										
	Att	Invol	EmoRes	ExPro	RatPro	Anger	Puz	Sad	Fear	Pride	Res2
U.S.											
<i>M</i>	4.31	5.26	3.22	3.37	3.47	2.42	1.57	2.06	1.87	2.23	2.86
<i>s.d.</i>	1.63	1.35	.62	.59	.54	1.42	1.31	1.36	1.41	1.53	1.32
<i>n</i>	83	83	83	83	83	83	83	83	83	83	83
Iraqi											
<i>M</i>	4.29	5.19	3.06	3.19	3.47	2.45	1.70	2.04	1.54	2.04	2.85
<i>s.d.</i>	1.58	1.27	.72	.56	.50	1.48	1.27	1.51	1.52	1.32	1.21
<i>n</i>	62	62	62	62	62	62	62	62	62	62	62

Note: Tone of coverage was assessed using two scales: overall tone of coverage was assessed using six 7-interval scales. The extent to which a broadcast embodied objectivity was also assessed using a single-item indicator. The 7-interval scale ranges from opinion/interpretation (a fair and balanced news story). Framing was assessed using a single 7-interval scale that measured the story's placement on a thematic (1) vs. epic continuum (7).

Table 4

Footage (combat footage vs. no combat footage) impact as a function of experimental condition in gender

Experimental condition	<i>Dependent Variables</i>										
	Inv	Att2	EmoRes	ExPro	RatPro	Anger	Puz	Sad	Fear	Pride	Res2
Female											
No Pic											
<i>M</i>	5.33	4.57	3.20	3.49	3.35	2.29	1.83	2.30	2.22	2.30	2.43
<i>s.d.</i>	1.25	1.35	.68	.66	.65	1.37	1.21	1.44	1.48	1.66	1.66
<i>n</i>	25	25	23	23	23	23	23	23	23	23	23
Pic											
<i>M</i>	5.14	4.04	3.40	3.35	3.52	2.64	2.06	2.44	2.24	2.06	2.91
<i>s.d.</i>	1.39	1.69	.62	.60	.53	1.50	1.41	1.37	1.58	1.42	1.26
<i>n</i>	45	45	45	45	45	45	45	45	45	45	45
Total											
<i>M</i>	5.20*	4.27*	3.33*	3.40*	3.46*	2.52*	1.98*	2.39*	2.24*	2.14*	2.75*
<i>s.d.</i>	1.33	1.66	.64	.62	.57	1.46	1.34	1.39	1.53	1.49	1.19
<i>n</i>	68	68	68	68	68	68	68	68	68	68	68
Male											
Total											
<i>M</i>	5.26	4.32	2.99	3.20	3.48	2.35	1.32	1.76	1.28	2.15	2.95
<i>s.d.</i>	1.30	1.53	.66	.53	.48	1.43	1.17	1.39	1.24	1.39	1.33
<i>n</i>	77	77	77	77	77	77	77	77	77	77	77

Note: Involvement, attitude, and response2 were assessed using a 1-7 interval scale. Anger, puzzled, sad, fear, and pride were assessed using 0-6 interval scales. Emotional response, experiential processing and rational processing were assessed using 1-5 interval scales. Higher scores signify greater involvement, more positive attitude, and processing. All emotions were evaluated using 0-6 interval scales. Higher scores indicate greater elicited emotion.

*significant difference between male & female

Table 5

Impact as a function of experimental inoculation condition

Experimental condition	<i>Dependent Variables</i>								
	Att2	EmoRes	ExPro	RatPro	Anger	Puz	Sad	Fear	Pride
					Total				
No Pic Inoc									
<i>M</i>	4.22	3.19	3.22	3.52	2.39	1.78	2.14	1.85	2.13
<i>s.d.</i>	1.46	.72	.67	.54	1.59	1.30	1.47	1.43	1.33
<i>n</i>	52	52	52	52	52	52	52	52	52
Pic Inoc									
<i>M</i>	4.01	3.11	3.28	3.53	2.49	1.56	2.00	1.66	2.20
<i>s.d.</i>	1.83	.67	.50	.46	1.45	1.34	1.51	1.59	1.46
<i>n</i>	45	45	45	45	45	45	45	45	45

Note: Involvement, attitude, and response2 were assessed using a 1-7 interval scale. Anger, puzzled, sad, fear, and pride were assessed using 0-6 interval scales. Emotional response, experiential processing and rational processing were assessed using 1-5 interval scales. Higher scores signify greater involvement, more positive attitude, and processing. All emotions were evaluated using 0-6 interval scales. Higher scores indicate greater elicited emotion.