

PRIME TIME POLITICS: TELEVISION NEWS
AND THE VISUAL FRAMING OF WAR

By

Jennifer Ogg Anderson

Dissertation

Submitted to the Faculty of the
Graduate School of Vanderbilt University
in partial fulfillment of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

in

Political Science

May, 2011

Nashville, Tennessee

Approved:

Professor John G. Geer

Professor Cindy D. Kam

Professor Marc J. Hetherington

Professor Bruce I. Oppenheimer

Professor Vanessa Beasley

Copyright © 2011 by Jennifer Ogg Anderson
All Rights Reserved

To Kevin, with a multitude of thanks for your love, patience and steadfast support

ACKNOWLEDGEMENTS

This dissertation would not have been possible without the financial support of the Vanderbilt Political Science Department and a Doctoral Dissertation Improvement Grant from the National Science Foundation. I am also grateful to the Center for the Study of Democratic Institutions for a summer fellowship that provided me with focused time to devote to this work, and to the Research on Individuals, Politics and Society lab of the Vanderbilt political science department for allowing me to conduct my own research study.

I am indebted to everyone who has provided support throughout the duration of this project. I am especially grateful to the co-chairs of my dissertation committee. I would like to thank Dr. John Geer for his excellent advice, patience and belief in this project from its inception. The dissertation would not have come to fruition without his leadership, and his professional and personal guidance taught me so much about political science research and life in general. Graduate school would not have been nearly as valuable to me without him for more reasons than I can list here. I would also like to thank Dr. Cindy Kam for her ideal mix of candor, critique and personal encouragement. Her guidance improved the project many times over, and I am consistently amazed at and appreciative of her efficiency and attentiveness. Thank you to the other members of my dissertation committee, Dr. Marc Hetherington, Dr. Bruce Oppenheimer and Dr. Vanessa Beasley, who have each given me invaluable feedback and support.

I would also like to express gratitude to members of my family. They have traveled this journey with me step by step. I would like to thank my parents for their love

and constant faith in me. Most importantly, I would like to thank my infinitely supportive husband, Kevin, and my son, Boone, who provide endless motivation and love.

TABLE OF CONTENTS

	Page
DEDICATION.....	iii
ACKNOWLEDGEMENTS.....	iv
LIST OF TABLES.....	ix
LIST OF FIGURES.....	x
Chapter	
I. WHY VISUALS MATTER.....	1
Importance of televised images of violence.....	5
Why television images deserve further study.....	9
Previous means of studying images.....	11
Plan of the dissertation.....	12
II. NETWORK TELEVISION NEWS AND IMAGES OF WAR: A COMPARISON OF VIETNAM AND IRAQ.....	16
Expectations of how Vietnam and Iraq War coverage should differ.....	18
Violent images in television news coverage of war: method and results.....	20
Data.....	24
Motivation for analyses.....	25
Measures of violence.....	26
Personal injury.....	27
Death.....	28
Explicitness.....	32
Graphicness.....	33
Length of violence.....	34
Perpetrators and targets of violence.....	36
Frame of violence.....	38
Evaluative tone.....	39
Exposure to television news stories of war: Vietnam versus Iraq.....	40
Conclusion.....	45
III. CONTRASTING VISUALS IN FOX NEWS AND CNN COVERAGE OF THE IRAQ WAR.....	47
Partisanship and cable news polarization.....	51

	Research design.....	54
	Results.....	56
	Coverage of war.....	56
	Story length.....	58
	Images.....	62
	Perpetrators and targets of violence.....	65
	Tone.....	66
	Frame of violence.....	69
	Reporting of casualties.....	71
	Discussion.....	71
IV.	EFFECTS OF TELEVISED IMAGES OF VIOLENCE ON PUBLIC SUPPORT FOR WAR.....	75
	News coverage and determinants of public support for war.....	76
	Hypotheses.....	79
	Methods and Data.....	83
	Description of Data.....	91
	Findings.....	92
	Discussion.....	99
V.	TELEVISION NEWS AND PUBLIC SUPPORT FOR WAR: AN EXPERIMENTAL INVESTIGATION OF THE EFFECTS OF IMAGES..	101
	Determinants of public support for war among individuals.....	102
	Research design and expectations.....	104
	Experimental study.....	105
	Treatment manipulation.....	106
	Justified frame.....	107
	Unjustified frame.....	108
	Dependent variables.....	110
	Explanatory variables.....	113
	Results.....	115
	Effects of framing.....	121
	Effects of violent images.....	122
	Conclusion.....	122
VI.	CONCLUSIONS.....	124
	Contributions.....	127
	Implications.....	130
	Implications for understanding news media.....	130
	Implications for understanding the responsiveness and accountability of political leaders.....	133
Final	thoughts.....	136

Appendix

A.	CHAPTER II APPENDIX.....	138
B.	CHAPTER III APPENDIX.....	141
C.	CHAPTER V APPENDIX.....	145
	REFERENCES.....	164

LIST OF TABLES

Table		Page
1	Summary of violent war images in television news coverage of Vietnam and Iraq.....	26
2	Average length of network television news stories of war (in seconds).....	42
3	Partisanship of cable news consumers.....	52
4	Average length of stories about the Iraq War: CNN versus Fox News.....	59
5	Content analyses of violence in Fox News and CNN coverage of the Iraq War, sample of evening news broadcasts 2004-2007.....	63
6	Violent war images in television news coverage of Iraq: Network news versus cable news.....	65
7	Content analyses of non-visuals in Fox News and CNN coverage of the Iraq War, sample of evening news broadcasts 2004-2007.....	68
8	Support trends available for the Iraq War.....	86
9	Major events in the Iraq War, 2003-2007.....	90
10	Summary statistics, opinion poll as unit of analysis.....	93
11	Correlations between polling data and variables from content analysis.....	95
12	Predicting support for U.S. involvement in Iraq.....	98
13	Differences of means of key variables.....	114
14	Predicting support for war.....	120

LIST OF FIGURES

Figure	Page
1. Images of Violence on March 31, 2004: Killing of American Contractors, Evening News Program Images. Most severe image from Fox News.....	2
2. Images of Violence on March 31, 2004: Killing of American Contractors, Evening News Program Images. Most severe image from CNN (1).....	3
3. Images of Violence on March 31, 2004: Killing of American Contractors, Evening News Program Images. Most severe image from CNN (2).....	3
4. Human Reactions to Violence.....	8
5. Images of personal injury in television news coverage of war.....	28
6. U.S. military deaths: Vietnam and Iraq.....	29
7. Reported U.S. military casualties: Vietnam and Iraq.....	30
8. Percentage of lead news stories reporting war casualties.....	30
9. Percentage of television news stories showing images of death.....	31
10. Explicitness of television news images of war.....	33
11. Graphic violence in television news images of war.....	34
12. Histograms of Length of Network Television News Stories of War (in seconds).....	44
13. The public's perception of CNN and Fox News ideology.....	48
14. Cable News Decision Making.....	57
15. Network News shows more moderate presentations of Perpetrators and Targets of Violence than Fox News and CNN.....	67
16. Percentage of citizens agreeing it was a mistake to send troops to war: Vietnam versus Iraq.....	77
17. Public support for the Iraq War over time.....	84

18.	Support trends of the Iraq War by question wording.....	87
19.	Distribution of Iraq public opinion polls, by month.....	89
20.	Treatments and subjects of experimental study.....	110
21.	Distribution of support for the war in Afghanistan.....	112
22.	Violence suppresses support for Afghanistan.....	118
23.	Vietnam photo: young child running.....	124
24.	Iraq photo: flag-draped coffins.....	125

CHAPTER I

WHY VISUALS MATTER

“A picture is worth a thousand words.”

-Proverb

In one of the most notorious acts of violence of the war in Iraq, four civilian American security contractors were murdered on March 31, 2004. After their vehicles were ambushed and set ablaze in Fallujah, a jubilant crowd pulled their corpses from the vehicles, beat them and dragged them through the streets. Eventually, the remains of two of the men were hung up on a bridge over the Euphrates River for all to see. Camera crews captured the incident on film, and soon the horrific images spread worldwide.

News networks in the United States faced a decision. Should the public see such gruesome images? The White House quickly issued a statement.

“It is offensive. It is despicable the way that these individuals have been treated. We hope everybody acts responsibly in their coverage of it.”

-Scott McClellan, White House Press Secretary

But what exactly does it mean to act responsibly? A terrible incident happened and news programs need to convey that, but how much do they need to show? The story indeed made headlines with every major news network, but there was much variation in each story’s visual content.

Among cable news heavyweights, Fox News produced a tempered report, showing only images of the burning vehicles and jeering crowds. CNN, on the other hand, argued that “some images are necessary to fully illustrate the extent of the

violence.” In addition to the vehicles and crowds, CNN footage displayed short but graphic clips of the beating of the bodies, as well as two different angles of the corpses hanging from the bridge. The contrast in images is striking. For still photographs of the images, see figures 1-3.



Figure 1:
Images of Violence on March 31, 2004:
Killing of American Contractors, Evening News Program Images.
Most severe image from Fox News.



Figure 2:
Images of Violence on March 31, 2004:
Killing of American Contractors, Evening News Program Images.
Most severe image from CNN (1).



Figure 3:
Images of Violence on March 31, 2004:
Killing of American Contractors, Evening News Program Images.
Most severe image from CNN (2).

The difference in the two networks' handling of the story above exemplifies the considerable variation that sometimes occurs among networks in their televised images of war. Differences in the types of images shown today versus forty years ago is greater still. And yet images matter greatly in how individuals perceive news about war. People who saw CNN's graphic images of the contractors' burned bodies likely felt very differently after watching the story than those who viewed the tempered version on Fox News.

Communication media are especially important to the democratic public's ability to make evaluations about war. Because few individuals have first-hand knowledge of wars fought on foreign soil, individuals rely almost exclusively on media to gather information about military conflicts. A large body of research has investigated how news media affect the public's level of support for war. While these studies have built a foundation for the study of war and public opinion, the vast majority of them focus solely on the spoken or written content of news¹. However, the visual information that is transmitted through television news programs is an essential component of the message received by television news consumers. As television news increasingly has become inundated with images over the past fifty years, this omission deserves attention.

Without a consideration of visuals, we capture only part of the causal story about why and when the public chooses to support war. Emotion-laden imagery may evoke powerful reactions that are independent of a news story's factual information (Sears 1993; Brader 2006). If television is the main venue through which most citizens learn about political dialogue (Mutz 2007), the visual presentations that accompany spoken words are critical to our understanding of public support.

¹ Exceptions exist, see Baum 2003; Fan 1993; Iyengar and Simon 1994; Prior 2003.

In this dissertation, I aim to answer the question of how televised images of violence affect public support for war. My contributions are three-fold. First, by developing a systematic and reproducible method of coding to measure news imagery, I seek to capture the power of war images on television. Second, I use this method to conduct an original content analysis of the Vanderbilt Television News Archives that adds a rich and nuanced body of evidence, comparing portrayals of war from Vietnam to Iraq and across news networks. Third, I test the relationship between violent imagery and public opinion using statistical models and a controlled, randomized experiment. These methods allow me to examine the causal connection between varied depictions of war violence and the public's support for war.

This introductory chapter will survey an array of theory and literature to show that disregarding the visual dimension of television news undermines our ability to understand shifts in the public's support for war. I then outline the plan of the dissertation.

Importance of televised images of violence

Generally, images on television play an important role in shaping evaluations. Research shows this is especially true in regard to judgments of individuals. As Doris Graber (1990, 138) states, "People draw a multitude of inferences from human physical appearance and movements....Many people infer personality characteristics from human physical features." Sometimes images in and of themselves can change assessments of events, as in the case of the 1960 Presidential debate between Richard Nixon and John F.

Kennedy. Those that listened to the debate on the radio thought Nixon won, but because of Nixon's disheveled appearance in contrast to Kennedy's poise and good looks, those who watched on television indicated that Kennedy fared better (Druckman 2003). Though comparatively little work has been done on the role of violent images in influencing opinions about war, visuals exert some of the same basic forces to elicit opinion change in both circumstances.

Much of what we know about the impact of visuals comes from research in the biological sciences. In opposition to rational choice theory, which emphasizes logic and informed deliberation, biological research finds that the public utilizes visual experiences as the most prevailing method of learning (Barry 2005; Damasio 1999). The centrality of the visual cortex within the brain makes the process of sight intimately associated with cognition. Furthermore, the sense of sight is the most highly developed of all the senses. Fast and efficient, it sends information throughout the nervous system more quickly than data from sense of hearing, touch, smell or taste (Zimmerman 1989). The brain processes images so rapidly that affective responses occur before an individual is conscious of their occurrence (Barry 2005).

This biological primacy of vision is important to the study of political news because an individual's sense of perception does not easily distinguish the origin of a visual stimulus- be it from the physical world or the mediated world². Even when cognitive processes alert the brain of the symbolic nature of an image, the brain continues to react to media images as if they were real (Grabe and Bucy 2009). When a televised image of a graphic war battle appears, for example, the human body responds physiologically with the release of adrenaline, accelerated heart rate, dilated pupils and

² By mediated world, I mean the world as conveyed through news media.

other physical preparation for action (Gleitman, Reisberg and Gross 2007). This predisposition to react to the physical and mediated worlds in the same way is known as the “media equation” (Reeves and Nass 1996). When considering an individual’s reaction, real life and television are not as different as they might seem.

Individuals react to violence in a large number of ways, depending on type of violence with which they have contact. While more severe effects of violence most often occur in direct victims, others who experience a connection to the victims or the event may be influenced as well, including those who see images of violence (Harvey and Tummala-Narra 2007). The more realistic or graphic the images of violence, the more likely an effect will occur (Gunter and Harrison 1998). Responses to violence may influence any part of a person’s being, including the cognitive, psychological, physical, spiritual or relational aspects of one’s life. Figure 4 presents a list of potential reactions to violence and violent images (Liang et al 2005; 2007).

While images of violence evoke a range of reactions, the material surrounding a news report and its images may have great impact on how viewers interpret violence. What are the psychological mechanisms at work when news reports enter into viewers’ decision making calculus? First, a large majority of viewers (nearly 78% in one experimental study, Cerulo 1998) consider violent acts in conjunction with the circumstance or person to which the story first exposed them. This point of entry establishes a connection with a viewer. While entry point does not necessarily dictate the way a viewer feels about it, the viewer usually frames an evaluation of the situation at hand in terms of the person or object first seen. Grammatical voice also affects viewer judgments of violence. Passive voice reports encourage a circular type of mental

Type of Effect	Possible Reaction
Cognitive	Difficulty remembering things Hard time making decisions Confusion Distortion of time Difficulty concentrating Too many thoughts at once Intrusive images Flashbacks Replaying the event
Psychological	Feeling helpless, hopeless or powerless Grief/numbness Dread/fear/safety concerns Guilt Dependency Feeling overwhelmed or vulnerable Feeling not yourself Triggering of prior trauma or losses Emotional rollercoaster Nightmares
Physical	Fatigue/change in sleep habits Eating/appetite problems Stomach problems Vomiting/diarrhea Sweating, rapid pulse, chest pains Dizziness, headaches Back or neck pain Startle reactions Catch colds or flu
Spiritual	Loss of faith Spiritual doubts Withdrawal from church community Lapses in spiritual practice Despair Questioning old beliefs Sense of the world being changed, out of kilter
Relational	Withdrawing from, or clinging to, others Alienation from friends, family, co-workers who "don't understand" Breakdown in trust Changes in sexual activity False or distorted generalizations about others Doubts about relationships Alternately demanding or distant with others Irritability

Figure 4: Human Reactions to Violence

processing, pointing individuals backward to the subject of the story and adding a desired emphasis. Active voice reports keep viewers moving forward as they reason, preventing overemphasis on any one aspect of a news story. Exit points, or the last image a viewer encounters, are also important. If viewers wish to justify violence, exit points are the most frequently cited source of validation (Cerulo 1998). Television news producers use a combination of these tools in attempts to manipulate public opinion. Hence, it is important to consider the material surrounding an image in connection with the image itself.

Why television images deserve further study

Given available data that images are influential in affecting a range of political experiences, including public support for war (Benjamin and Shapiro 2008; Lanzetta et al. 1985; Sullivan and Masters 1988; Todorov et al 2005), it is remarkable that scholarship has not systematically investigated the political visuals of network news stories. Nevertheless, the visual medium of communication is largely ignored in studies of war and public opinion. The accepted theories of the influence of news on both agenda setting and media framing³ effectively overlook imagery in television news. This omission deserves renewed attention given that the public takes into account a wide variety of sources when determining whether or not to support protracted military conflict. If “the television age demands a reconsideration of our print-age value

³ Agenda setting is the media’s ability to determine which issues will be at the forefront of public discourse, influencing which issues are most important. Framing is the process by which certain aspects of a perceived reality are made salient in a communicating text, in such a way as to promote a certain view of the world or policy recommendation (Entman 1993)

structure, which routinely prizes abstractions conveyed through words more than the realities and feelings conveyed through pictures,” as asserted by political scientist Doris Graber (1988, p. 174), a comprehensive study is long overdue. Still, several methodological and practical challenges exist in studies of images that are not present in evaluations of text or transcripts.

In particular, imagery does not adhere easily to concrete rules. As Supreme Court Justice Potter Stewart once alluded when asked to describe obscenity (“I know it when I see it.”), images are difficult to define. Furthermore, the variation in interpretation of imagery among individuals is substantial. While it is possible to codify images in rigorous and systematic ways, assessing these differences in perceptions necessitates much care, time, and thought (Grabe and Bucy 2009). These considerations extend outside the realm of that needed for computerized content analysis of news databases.

The methodological obstacles confronting a large-scale content analysis of television news coverage are particularly problematic. Indeed, stumbling blocks are present in analyses of imagery that are largely missing in analyses of print news sources or verbal transcripts. Whereas a search for particular words or word combinations on Lexis Nexis yields quick and concrete results, no such search engine exists for images. Individuals must personally view and code images. Researchers must also jump the hurdle of limited access of images. The Vanderbilt Television News Archive is the only complete source of national nightly news programs from the major networks. Even some of the networks themselves did not retain copies of newscasts from the late 1960s and early 1970s.

Previous means of studying images

Several innovative techniques for coding television news visuals have been developed since strident calls for attention to imagery in the 1980s, but none of them has caught on in the profession in a meaningful way. Masters and colleagues (Sullivan and Masters 1988; Masters 1989) evaluated multiple forms of leader displays, measuring attitudes and facial displays such as happiness and reassurance, anger and threat, and fear and evasion. They found that viewers accurately distinguish expressions, and furthermore that emotional responses to facial displays of political candidates influenced the public more than cognitive variables such as issue agreement or party identification. Others specified the effects of camera techniques (Bucy and Newhagen 1999; Kepplinger 1991). Long shot viewpoints create space and detachment between viewers. Close-up camera shots manipulate viewers by establishing intimacy without infringing of norms of personal space. Extreme close-ups, on the other hand, may violate norms of face-to-face interactions, emphasizing flaws and causing viewer discomfort. Camera angles also affect viewers. Eye-level camera angles seem balanced, while low-angle views (looking upward) devote a sense of power to the subject. Similarly, camera movements shape viewer comprehension, with zoom-in movement providing emphasis and intimacy while zoom-out movements de-emphasize and distance.

Graber's (2001, 2004) Gestalt procedure- named for its emphasis on totality of meaning- simplified coding by concentrating on the consequence of the whole of a news story rather than on individual and often complicated visual elements. This method considered the following four broad story components:

- The general political environment at the time of the broadcast.

- The anchor's introduction and following anchor and reporter editorializing.
- Audio-visual messages communicated by a mix of words, pictures and sounds.
- The interaction between story elements within a single report or among reports in the same news cast.

Nevertheless, later scholars found these methods difficult to reproduce and quantify. As a result, content analyses of television news continued to rely on transcripts- omitting visuals, or using only rough categories of visuals that could be measured easily (Grabe and Bucy 2009; Coleman and Banning 2006). Rough categories may be informative for some studies, but for the purpose of separating the effects of news images, much greater detail is required.

Together, the many barriers to the study of news imagery yield a limited understanding for how media as a linking mechanism affects public support for war and public opinion as a whole. While sophisticated arguments have explained the effects of television news on public opinion, my coding method goes beyond previous means to add a more comprehensive approach to the study of images. The best way to study images is to utilize a specific and reproducible system of measurement. I build from Graber's (2004) model, combining her ideas of simplification of meaning with the specificity of research on video game ratings (Haninger, Ryan and Thompson 2004; Smith, Lachlan and Tamborini 2003).

Plan of the dissertation

The plan of the dissertation is as follows. In Chapter 2, I develop a coding scheme for measuring violent war images in television news. I then use the method to

analyze network television news coverage of war of Vietnam and Iraq. My coding scheme springs from research on video game violence. Video game research is useful to this study because of its meticulous definitions of degrees of violence. Though these specifications were created to offer parents an explanation of how video game violence affects children, I use them to quantify the violence in war images. Presentations of violence are rampant in television news reports of war, and the nature and context of war violence are important in shaping viewer opinions.

The extensive content analysis of network television news of Vietnam and Iraq shows enormous differences in presentations of violence. News coverage of Iraq tends to have three to four times the amount of violent imagery compared to coverage of Vietnam. Furthermore, today's news reporters tend to offer more opinionated remarks that frame violence in news stories compared to relatively even-handed reporters of the Vietnam era. The data set resulting from this content analysis lends itself to the generation of precise hypotheses, testable in statistical and experimental models later in the dissertation.

In Chapter 3, I use the same coding scheme described in Chapter 2 to measure news imagery across cable networks CNN and Fox News. Portrayal of war across networks is of significant interest to scholars in this age of increasing media polarization. Viewers have a choice when they decide where to go for television news, and that decision may affect their level of support for war. By evaluating lead stories from CNN and Fox News during the Iraq War, I can determine actual differences between the presentation styles, content and imagery of the two networks, as well as how the ideological leanings of CNN and Fox News affect their visual presentations of war. Largely, the two cable networks offer viewers similar amounts and severity of war

violence. The difference between networks is greatest in non-visual depictions of war, including tone, frame and story length.

In Chapter 4, I generate a set of hypotheses about how images of war violence are likely to affect the public. Whereas violence typically wears a normative label of negativity, I argue that war violence is unique in that it can affect the public positively *or* negatively, depending upon how it is framed by news reporters. In any case, severely violent images will act as a magnifying glass, drawing viewers' attention to the story at hand and magnifying the impact of a reporter's words. I test these hypotheses through a regression model of public support for war. I use public support data from aggregate public polls as the dependent variable and include independent variables from the data set generated in Chapter 2. I find support for the hypotheses that violent images do shape public opinion, conditioned by frames.

In Chapter 5, I further investigate the causal relationship between violent war images and public support at the individual level through a randomized and controlled survey experiment. I conduct the experiment through a well-known survey firm on a nationally representative sample. The experimental treatments manipulate both the presence of violent imagery (high versus low violence) and the frame of violence (justified versus unjustified) in actual television news stories about events in the war in Afghanistan.

By controlling both content and levels of exposure, I am able to isolate the precise effects of violent imagery on viewers' levels of support for war. Violent images and frame of story both have effects on individuals' support for war. Violent images and unjustified frames decrease support for war, while justified frames increase support for

war. Viewers exposed to highly violent images expressed significantly less support for war than those exposed to low violence images within the same unjustified frame. When stories are framed as displaying justified violence, individual-level effects are less pronounced because the positive influence of the frame counteracts the negativity of the violence. Nevertheless, this chapter yields further evidence that visual information can and does influence the public's opinions about war.

In Chapter 6, I conclude by discussing the contributions and broad implications of my findings. Here I focus on the ways political science must reconsider media effects to include images as a source of political information. I also discuss how images help in holding political leaders accountable and responsive to the public. In particular, the chapter evaluates difficulties faced by policy makers as they struggle with finding the kinds of policies that the public will support. Finally, I consider the ways images are likely to permeate political culture to an even further extent in the future as the younger generations share media over the Internet.

CHAPTER II

NETWORK TELEVISION NEWS AND IMAGES OF WAR: A COMPARISON OF VIETNAM AND IRAQ

A cursory glance at television news war coverage from the Vietnam era and today suggests vast changes have occurred over the past five decades. The prototypical story of the Vietnam War revolves around a television news anchor at his studio desk. He reads a report of the day's events, with a map of Vietnam or updated casualty numbers projected over his right shoulder in black and white. In contrast, current television news coverage on the Iraq war show a news anchor for just a few moments before cutting to video feed of action on the battlefield. Along with the voiced-over news report, viewers are inundated with colorful and graphic displays of violence, accompanied by the sounds of arms fire or fleeing civilians. While television news of both Vietnam and Iraq convey details of war time events, a noticeable disparity exists in the amount and type of visual information contained in the reports.

As television news programs change in their visual presentations of war, the way the public thinks about war may also change. The same battlefield event may affect viewers differently depending on how it is portrayed. It may be that the message offered to media consumers matters less than the presentation of that message. For example, one could imagine reading or hearing about the death of an American soldier might have a less powerful impact than learning that fact with a graphic visual background of the dead soldier.

The principal questions motivating this research are: (1) How much has the degree of violence in television news presentations of war changed from the Vietnam War to Iraq? (2) How much has the amount of network news coverage of war changed from Vietnam to Iraq?

In this study, I conduct an original content analysis of the Vanderbilt Television News Archives, evaluating lead stories about war from the national evening news (ABC, CBS and NBC) during the Vietnam War and current war in Iraq⁴. Much speculation exists over how television news coverage has changed over the last fifty years. Current media research assumes that the broader trend of shorter stories, shorter sound bites and more graphic content holds for news stories about war (Hallin 1992), but this has yet to be demonstrated in a quantifiable fashion. We must know *how* and *when* television news war coverage has changed before we can make theoretical claims about how these changes affect public support.

My research shows that coverage of the Iraq War is more explicit and graphic in its portrayal of violence and death than news stories of the Vietnam War. As one of the first detailed content analyses of network television news coverage of war imagery, these data will make a rich empirical contribution to the fields of political communication and communication more broadly.

⁴ My data collection also included analysis of approximately one-half of the days of the Persian Gulf War. Because the Persian Gulf War is unlike most wars in American history, with its relatively short duration and low rate of casualties, I did not include a discussion of Persian Gulf images in this chapter. Instead I will concentrate on the differences between Vietnam and Iraq since they are more analogous in regard to length of war and actual violence that took place. It is difficult to determine if Persian Gulf television news coverage failed to show violence because of network decisions, lack of video footage, or simply because there was relatively little violence taking place. Contact the author for results of data analysis of the Persian Gulf War.

The chapter proceeds as follows. First, I discuss expectations about differences in coverage between Vietnam and Iraq. I next detail my original coding scheme to measure war images and report and discuss the results of the data collection. Although I acknowledge that the audio aspect of television is important in shaping political knowledge and public opinion (Volgy and Schwartz 1980), I will largely focus on television's visual element- specifically because it has been ignored as an informational resource. I then report the results of my data analysis, highlighting severe differences between coverage of war violence in Vietnam and Iraq.

Expectations of how Vietnam and Iraq War coverage should differ

Some severe differences between television news coverage of Vietnam and Iraq might be expected given the broader trend that media in the twenty-first century vary enormously from media during the Vietnam era. These differences present themselves in a number of ways. First, the media environment has grown and changed extensively. In the late 1960s, television news consumers were offered only the three major networks, and only those for limited hours of the day. Television programming ceased every evening at midnight and resumed the following morning around 6:00 a.m. Compared to today's 24-hour cable options, numbering in the hundreds of channels, competition between networks in the Vietnam era was greatly reduced.

Also in regard to media environment, a much wider range of television content is now deemed acceptable compared to the 1960s. Up until and extending through the first years of the Vietnam era, television producers were hesitant to show viewers even basic

human activities. The television show *I Love Lucy* (late 1950s) depicted lead actors Lucille Ball and Desi Arnaz as having separate beds, despite the fact they were married in real life. In *The Brady Bunch* (1969-1974), the bathroom shared by the six siblings lacked a toilet. Such constraints were very likely to influence the types of images thought appropriate for nightly Vietnam news programs. In contrast, today's television entertainment offers viewers graphic representations of violence on such network shows as *CSI*, *NCIS* and *Law and Order*, paving the way for equally violent images on television news. Society as a whole has become conditioned to high levels of violence through its presence in all types of media, including the internet, movies, magazines and video games. It is only natural that society's acceptance of heightened levels of violence would manifest itself through television news programs as well.

Secondly, modern technological advances allow for greater availability of and access to images than existed during the Vietnam War. The size, portability, and cost of video equipment during Vietnam severely limited the number of war events that were caught on film. In contrast, today's high-tech equipment is cheaper, smaller and omnipresent on the battlefield. If more images of war exist, it stands to reason more images of war violence might infuse nightly news programs.

While the aforementioned reasons suggest a greater likelihood for television news networks to air images of violence in Iraq stories of war compared to Vietnam, characteristics of the two conflicts themselves would hint otherwise. The actual amount of violence that occurred during Vietnam dwarfed the level of violence in Iraq. Indeed, according to United States government statistics, 56,700 American troops died in the Vietnam War from 1963-1972. In contrast, from 2003-2007 in the Iraq war, 3,907 U.S.

military deaths occurred. Given that Vietnam had about fourteen deaths for every one death in Iraq, societal, technological and media-related forces may not be enough to outweigh the fact that Vietnam was the more violent conflict. In this way, a comparison of news images between Vietnam and Iraq is a hard test. If news networks display more images of violence for Iraq than Vietnam despite the disparity in actual level of violence, there will be convincing evidence that coverage of war today differs fundamentally from past news reports.

Violent images in television news coverage of war: Method and results

How much has presentation of violence in television news coverage of war actually changed since the Vietnam War? I design a coding scheme to evaluate empirical changes in presentation of war news⁵. My coding scheme primarily evaluates visual presentations of war violence, although frame of violence, type of story and evaluative tone are also considered. In order to quantify violence, I draw from coding schemes used in research on the effects of violence in video games. Video games are rated by the Entertainment Software Rating Board (ESRB) for age appropriateness and labeled with content descriptors that indicate what content triggered a particular rating. Research studies on the effects of video game violence (Haninger, Ryan and Thompson 2004; Smith, Lachlan and Tamborini 2003) utilize an even more detailed system for the quantification of violence.

These studies question if violent video games cause increased aggression in those that play them. Collectively, they offer a mixed bag in terms of their results of effects on

⁵ While the coding scheme developed is potentially applicable in studying a range of violent news events, I concentrate only on war in this chapter.

children, teens and adults. A 1999 study by the United States government concluded that violence in video games is not fundamentally linked with aggression. David Satcher, then Surgeon General, reacted to the study by saying, “We clearly associate media violence to aggressive behavior. But the impact was very small compared to other things (Wright 2004).” However, more recent studies, including a panel study conducted by Iowa State University on American and Japanese children, have found that children become noticeably more aggressive after playing violent video games (Anderson et al 2010). On either side of the debate, few would argue that if an individual plays a violent video game, he will immediately go out and mimic the game’s violence. A common ground position involves shaping norms and attitudes. As those shift over time, the changes begin to emerge in a person’s behavior and beliefs. In the same way, my research supposes violent images in television news will gradually shape the norms and attitudes of the American public.

Just as violent video games rated for more mature audiences are thought to have relatively increased effects on aggression, more violent images in television news may be increasingly likely to influence opinions about war. For the purposes of my study, video games like Pokeman, Mario Kart, PunchOut! or Wii Play- rated E (everyone) or E-10 (everyone 10 and older)- correspond to no violence or very mild presentations of violence in television news, such as peace talks, or at worst a bomb exploding in the distance. Games like Infamous or UFC 3 earn a T (teen) rating, similar to moderate depictions of violence such as that seen from the firing of a missile at a building or the bandaging of a soldier’s wound. Games rated M (mature), such as Gears of War 2, Fallout 3, or X-Men Origins, contain intense violence, blood and gore. An equivalent in television news war

violence is the up-close image of a body carted away or a screaming, bloodied civilian. Ratings of AO (adults only) are rarer and often more sexual than violent in nature. Grand Theft Auto- San Andreas received an AO rating for violence, equivalent to the image of a soldier or civilian's moment of death.

While to my knowledge no previous political science studies use video game research methods, the straightforward yet detailed measurements of violence available in video game research lend themselves simultaneously to replication and practicality. Hence, by translating this method for use by social scientists, this research allows for systematic inclusion of visuals in models of support for war.

Specifically, my coding scheme combines core elements from Haninger, Ryan and Thompson's (2004; hereafter HRT) and Smith, Lachlan and Tamborini's (2003; hereafter SLT) measures of violence in video games and alters them in ways that makes the measures appropriate for real life images (instead of graphical images present in video games). I modify HRT's definitions of categorical measures of "portrayal of violence" to measure the level of personal injury in news clips. Modifications are necessary because HRT's measure does not include the range of potential injuries that exist in images of harm on the battlefield. For example, I add a new category not present in HRT's measure for the measure for "assumed" violence. I classify personal injury as assumed if no depiction of personal injury is seen, but can be inferred. An example of this is the exploding of a bomb in a crowded marketplace. While HRT might have deemed such a category irrelevant for video games, in real life, even assumed harm to others may influence the opinions of viewers. I also expand HRT's categories of "mild," "moderate" and "strong" violence to include a larger number of potential injuries. For

example, their method did not allow specifically for images of bruising, severed limbs or visible entrails.

I borrow from SLT's measures of explicitness and graphicness of violence. I deviate from the original measures of explicitness by adding a category of "not shown on screen" to the explicit measure. Whereas SLT's measure of graphicness was simplified to none, mild, moderate or extreme with no specifics as to what types of images fit into each category, I develop specific requirements for each category⁶. I also add a separate category for the measurement of images of death, a category unused by both HRT and SLT. Hence, by combining old methods of coding in new ways, adapting them to consider real-world images instead of video games, and adding new measures, my coding scheme offers an innovative and more highly-specified approach to the measurement of news images of violence.

Using this coding scheme, discussed in further detail below, I conduct a large-scale content analysis to evaluate news imagery between the Vietnam War and the Iraq War. I selected the Vietnam and Iraq wars because they are analogous in many ways. Both wars were pre-emptive. Both committed large numbers of American troops for long periods of time. Both attempted to create and train a viable native military. Public support for both conflicts started at relatively high levels only to fall dramatically over following years. Finally, both were violent conflicts, resulting in significant military and civilian casualties. Of these similarities, the latter is most important to this study. By

⁶ Specifically, mild graphicness occurs when the only blood present is a small scrape or scratch, moderate graphicness involves noticeable blood or gore, covering significant portions of one's body. Puddles of blood on the ground is included in this category as well. Extreme graphicness occurs when blood covers all or most of the body, and/or dismemberment is shown.

choosing wars that both imposed high levels of violence⁷, I can make comparative evaluations of images of war violence without a selection bias.

Data

All data were collected at the Vanderbilt Television New Archives. The Archives are located in Nashville, Tennessee, on the campus of Vanderbilt University and contain the evening news programs of the three major networks (CBS, NBC, ABC), dating back to 1968. Data are available on a secure network, accessible only in the archive office or at the central library.

Of the 3,596 days of war in the population of my study, I sampled 953 days of news coverage. The sample consisted of approximately one-fourth of the total days of the Vietnam and Iraq conflicts⁸. Using a random number generator, I drew a sample of 409 days from Vietnam and 437 days from Iraq. Each sample was randomly divided between the networks of ABC, CBS and NBC. Of the sampled days, archived news coverage was available on 786 days⁹. I code only lead news stories, or the first two substantive news stories of a broadcast. Since most Americans, the majority of the time, pay little attention to political news of any kind (Althaus 2007, Price and Zaller 1993), lead stories are most likely to reach the mass public. Additionally, news networks order stories by importance. By evaluating lead stories instead of all stories, I am able to observe when war is most salient. If lead stories are more important, images from lead

⁷ Although both wars involved high levels of violence, with attention to casualties, Vietnam was much more deadly. This makes for an even harder test, as I find that presentations from Iraq are more violent even though fewer deaths occurred.

⁸ Archive coverage is not available until August 5, 1968. Consequently, coverage of Vietnam began at that time, concluding January 27, 1973. The Iraq period of study was from March 20, 2003-December 31, 2007.

⁹ Archive footage is sometimes unavailable due to computer errors. More often, unavailability results when a network does not air a news broadcast due to a sporting event or other television program.

stories are also more likely to reach the mass public in other ways, through the Internet or print media.

Motivation for analyses

In order to ensure that this content analysis is capturing the full arsenal of news images that may shape viewer opinions, it is crucial to consider a number of visual variables, as well as a lesser number of non-visual variables that are likely to condition the effects of images. The data collected here, while interesting in their own right, will also be used in Chapter 4 to determine how news images of war affect aggregate public opinion.

I devote attention to numerous categorical measures of violence for two reasons. First, it is theoretically possible that different types of violence may affect people in varying ways. For example, might images of death be stronger influences on public opinion than images of personal injury? The inclusion of multiple measures allows for the testing of this possibility. Secondly, the large number of variables for measuring violence provides a highly specific and accurate measurement of the amount of violent imagery within a television news story. An additive measure of all variables of violence will be used later in the dissertation to track how violent images influence public support for war over time.

Other measures of images, such as perpetrators and targets of violence, also play a role in a viewer's interpretation of visual information. These data are considered in models of public support for war later in dissertation chapter 4. Finally, the frame and

tone of the story may condition overall effects of violence. I include measures for these characteristics in the content analysis as well.

Measures of Violence

To measure violence in its many forms as accurately as possible, I code violence using five different variables. These variables include portrayal of personal injury, portrayal of death, explicitness of violence, graphicness of violence, and the amount of time violence appears in a news story. Analyses of the data show the presentations of violence are indeed markedly different between Vietnam and Iraq. Displays of violent images during television news stories on Iraq dwarf stories on the Vietnam War in almost every category, suggesting that violence in television news reports of war has increased since the Vietnam era. Table 1 presents a summary of the data on violent images. These data reflect the percentage of war stories containing images of violence, divided by violence measure and war. In the next sections, I will specifically describe each type of violence and its presentation in the data.

Table 1:
Summary of Violent War Images in Television News Coverage of Vietnam and Iraq*

Violence Measure	Vietnam War	Iraq War
Images of Personal Injury	16.3%	56.38%
Images of Portrayal of Death	7.07%	31.28%
Images of Explicit Violence	16.84%	72.84%
Images of Graphic Violence	10.33%	44.44%
Average Length of Violent Images	5.89 seconds per story	18.22 seconds per story

*These data reflect the percentage of war stories containing images of violence. All images in television news reports are included, regardless of severity.

Personal Injury

First, I evaluate the portrayal of personal injury. This is violence in its most basic definition, as intentional acts in which the aggressor causes or attempts to cause physical injury or death to another person (Haninger, Ryan and Thompson 2004). This variable is coded on a five-point scale, from 0 to 4, with (0) being no violence whatsoever, (1) assumed violence, (2) mild violence, (3) moderate violence and (4) strong violence. I code violence as “assumed” if no depiction of personal injury is seen, but a violent act occurs. Camera shots from a distance- of ground fire, explosions, etc. - are often coded this way. “Mild” violence occurs when the most severe depiction of violence involves minor auditory or visual representations of injury and pain that primarily serve to notify the viewer the person was harmed. For example, a victim may grunt or stagger, but does not fall, scream or bleed. If violence is “moderate,” the most severe depictions of violence involve moderate representations of injury and pain. A person may scream, fall down, show visible bloodshed, bruising or other indication of injury. The most extreme case of violence, coded “strong,” occurs with representations of injury and pain that exaggerate or focus attention on suffering. An individual who screamed in agony or continued vocalization of pain, bled excessively when injured, had severed limbs, showed visible entrails or was otherwise physically tortured would be coded in this category.

Figure 5 presents the results of data analysis of images of personal injury. Less than 17% of Vietnam stories show any visual presentation of injury whatsoever. Only 1.6% of Vietnam stories show “strong” images of harm. On the other hand, over 56% of news stories on Iraq contain violent images of injury, with almost 40% of stories containing “moderate” or “strong” violence.

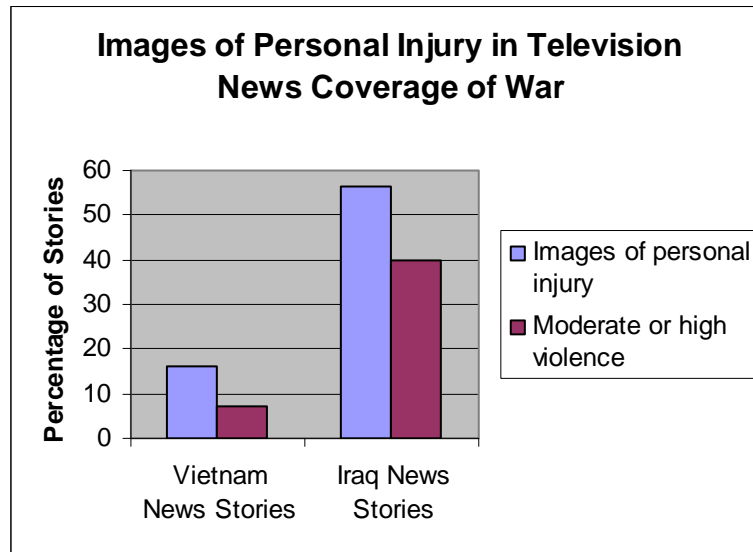


Figure 5: Images of personal injury in television news coverage of war

Death

Second, the portrayal of death may affect a viewer's outlook of war. Television news coverage may show death in three degrees of intensity. (1) Dead bodies are alluded to, or blood and/or the site of death is shown. (2) One or more dead bodies are shown. (3) The moment of a person's death is shown on film. I code (0) if no death is portrayed in a news story. If a story shows more than one type of portrayal of death, I record the most severe portrayal. I also compare the deaths reported in news casts to the actual number of casualties that occurred.

Curiously, a stark difference exists between Vietnam and Iraq coverage of war casualties. Empirically, thousands more American military deaths occurred in Vietnam

than in Iraq (see figure 6).¹⁰ When Vietnam news stories feature death reports, the number of deaths reported is much higher than Iraq reports of the same nature (see figure 7.) Nevertheless, death is still mentioned and shown more frequently in television news coverage of Iraq than Vietnam. Indeed, casualties are reported in just 35% of all lead Vietnam War stories. Iraq reports discuss casualties almost twice as often, in 66% of lead stories, even though there are fewer deaths to discuss (see figure 8). To control for differences in ease of acquiring images, these data combine both verbal and visual representations of casualties. Dead bodies are shown in less than 8% of Vietnam stories, while Iraq stories show death over 31% of the time (see figure 9).

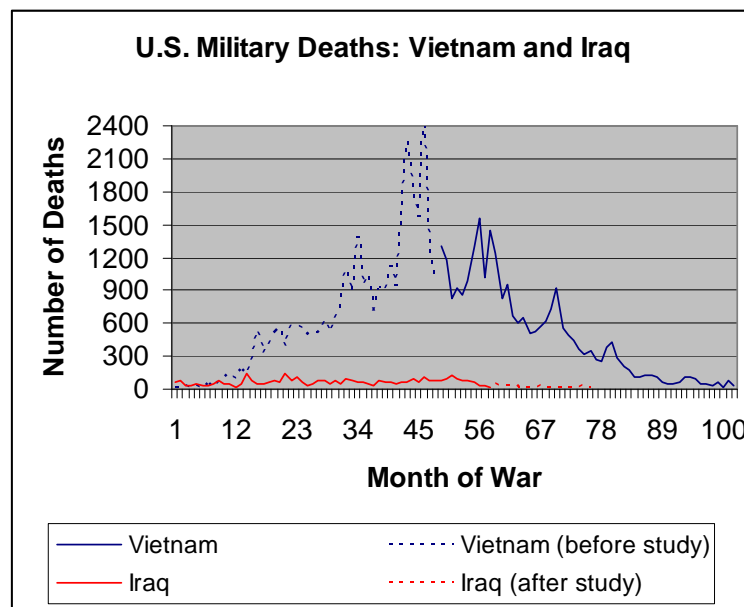


Figure 6: U.S. military deaths: Vietnam and Iraq

¹⁰ According to United States government statistics, 56,700 American troops died in the Vietnam War during the period of this study, 1963-1972. In contrast, from 2003-2007 in the Iraq war, 3,907 U.S. military deaths occurred

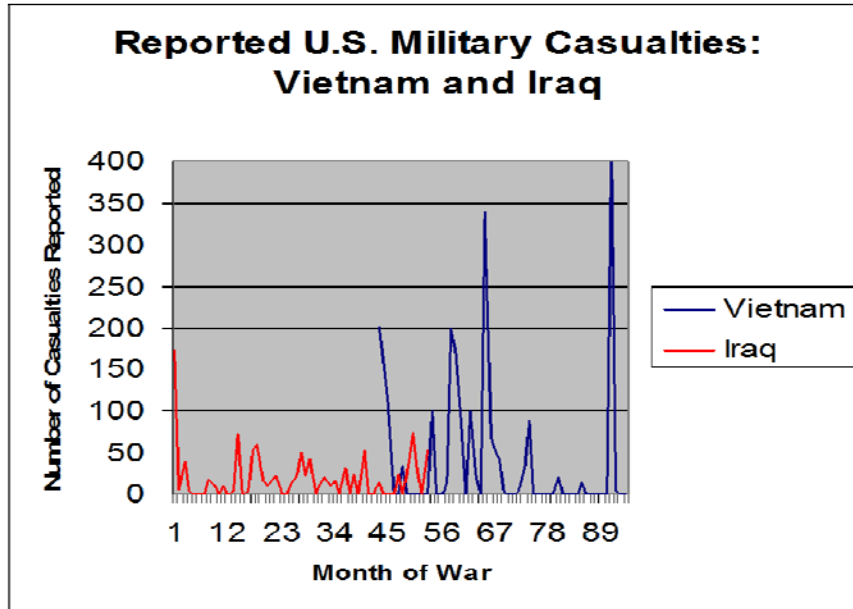


Figure 7: Reported U.S. military casualties: Vietnam and Iraq



Figure 8: Percentage of lead news stories reporting war casualties

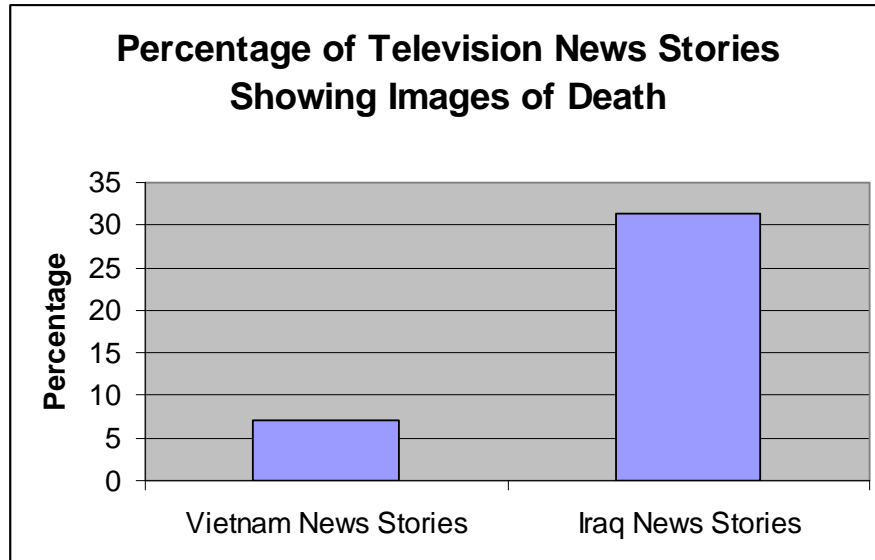


Figure 9: Percentage of television news stories showing images of death

Several possibilities exist for the disparity. First, the Vietnam War involved much more negotiation between states than Iraq, and lead Vietnam stories quite often covered current or upcoming peace talks that had more to do with the future than past or current events. It may be that coverage of peace talks superseded coverage of casualties in importance in the minds of network executives and the public. Second, remember that this study examines only lead stories of war. Reports of casualties may have been present in Vietnam coverage, but more likely to occur later in the newscast. This makes sense if the widespread nature of casualties during Vietnam somewhat jaded the public. If many people die most days, does it remain as newsworthy? The lesser frequency of casualties in Iraq may have made casualty reports more likely to lead news programming. Finally, images likely add to the newsworthiness of casualty reports. Such stories are more likely to attract the attention of the public if they include a visual of the reported violence.

Without imagery in the majority of Vietnam reports, discussions of casualties often took the same form time after time, arguably making them less interesting.

Explicitness

Third, the explicitness of violence may matter in presentations of violence, defined as the amount of distance with which physical aggression is shown. I select the highest degree of explicitness shown throughout a story. Violence may be (1) referenced but not shown on screen, (2) shown from a distance or (3) shown to the viewer from an up close camera perspective. Again, I code (0) if no violence exists in a given news story.

Results of data analysis show that over 60% of Iraq news stories show violence from an up close camera perspective. This number more than triples the amount of violence shown on Vietnam news stories in **any** form, and only 11% of Vietnam stories show viewers violence up close. The up close camera perspective has become the norm in bringing violence into viewers' living rooms. When Vietnam era producers made decisions on camera perspective, they chose a distance perspective about one-third of the time. Television producers of Iraq stories are much less likely to choose a distance viewpoint, opting for long shot views in less than one-sixth of war stories. Figure 10 presents these data.

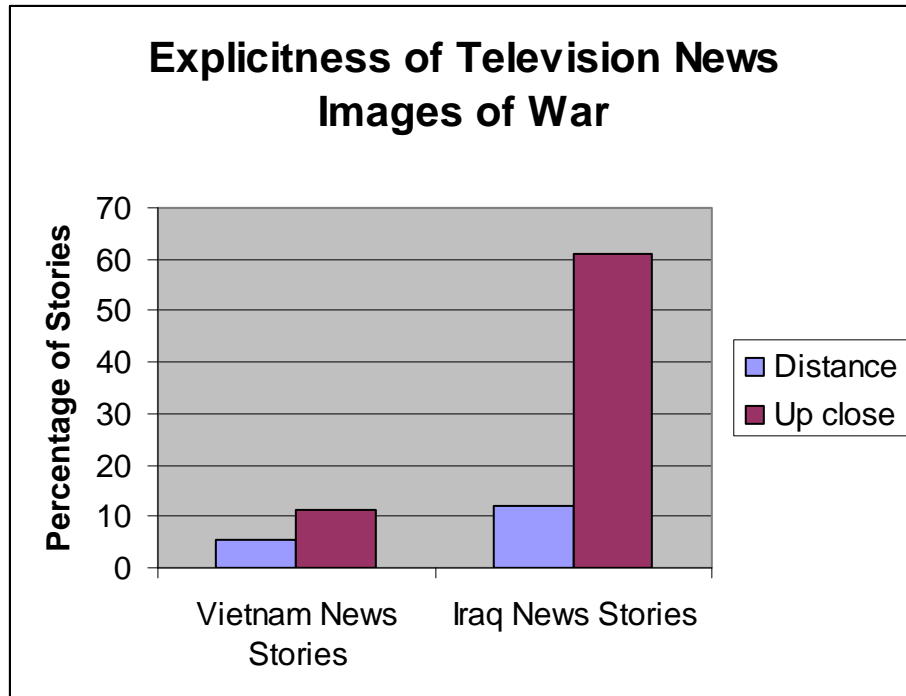


Figure 10: Explicitness of television news images of war

Graphicness

Fourth, I evaluate the graphicness of violence, or the amount of blood, gore or dismemberment shown. This variable is also measured on a four-point scale, from (0) none to (3) extreme graphic presentation. (1) Mild graphic violence exists if an individual has only a small scrape or scratch. (2) Graphicness is moderate if blood/gore is noticeable and/or covers significant parts of the body. If a camera focuses on puddles of blood on the ground, I code this category as well. Dismemberment is also included here if the wound is treated or bandaged. (3) Extreme graphic nature exists when blood or gore covers all or most of the body. Dismemberment is noted here if the wound is exposed.

Results show that less than 11% of Vietnam news stories are graphic in nature (showing some degree of blood and gore), while over 44% of Iraq stories contain some graphic portrayal of violence. While extremely graphic presentations are still not commonplace, they start to emerge as an option during coverage of the Iraq War. No stories show extreme blood or gore during Vietnam reports, but in 7% of Iraq stories, producers allowed extremely graphic violence to air on the evening news. Figure 11 shows the disparity between Vietnam and Iraq in displays of graphic images.

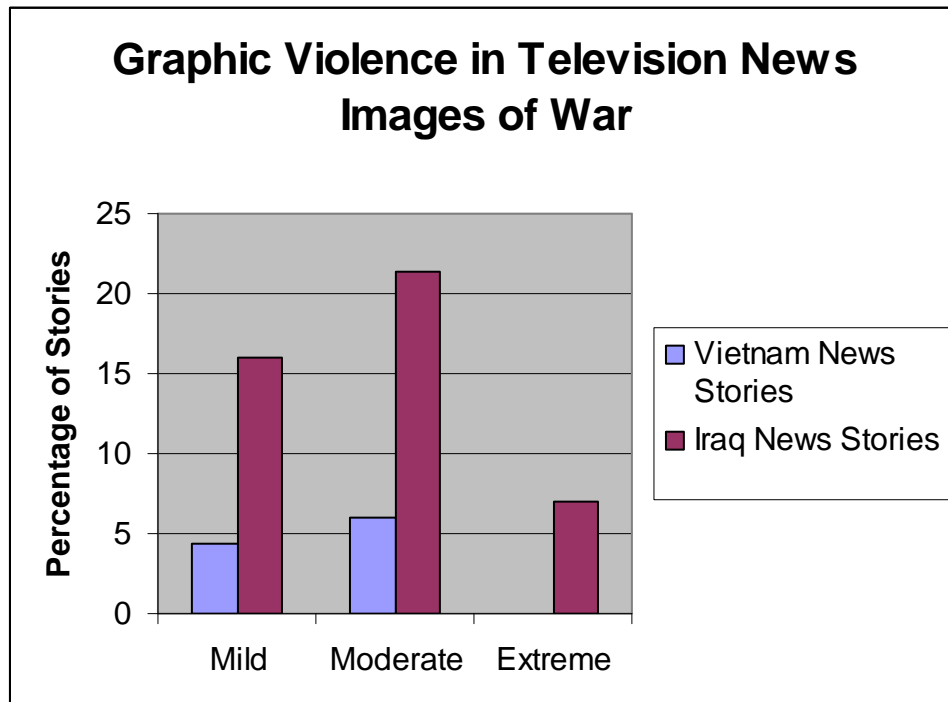


Figure 11: Graphic violence in television news images of war

Length of violence

While the first four measures of violence gauge the most severe depiction of violence throughout a news story, an index of the total amount of time violence appears

on screen provides another lens through which to assess aggressive images. I measure time in seconds, as well as a percentage of total story length. I evaluate total amount of time of violence, as well as three subcategories, including acts of violence (gun shooting, bomb exploding, etc.), precursor acts of violence (selecting a weapon, aiming), and depictions of injury after violence (person lying dead or wounded). Precursor acts of violence must point to intent to commit a violent act in order to qualify. For example, a soldier patrolling the streets with a gun in his possession, but not aiming it, would not qualify as a precursor to violence. A soldier walking the streets, gun raised and aimed, however, is a precursor act of violence.

Data analysis shows the mean amount of violence in Iraq war stories is 9.22 seconds of violent acts, 2.8 seconds of precursor acts of violence and 6.2 seconds of images of injury. Vietnam stories average less than 3 seconds of violence in every category, but this number does not tell the whole story. Whereas most Iraq stories show some images of violence, most Vietnam stories do not. In fact, less than 17% of Vietnam reports show any of the four measures of violence. Averaged together with stories that contain no violent images, the means drop severely. However, if a Vietnam story does contain violent images, it is likely to contain more of them than a story on Iraq. For example, of those stories containing acts of violence, Vietnam stories average 23.23 seconds of violent acts. The mean of Iraq stories is lower, at 15.68 seconds.

This finding fits with the type of coverage offered by networks during the Vietnam War. Because securing video feed of war images was much more costly during Vietnam than Iraq, fewer camera crews were present to capture war events. When a network did put forth the money and resources to take video of Vietnam, it wanted to

capitalize on each opportunity. Why send a camera crew for only a few seconds of video? Hence, when networks aired images from Vietnam, they usually aired several minutes at a time. While violent images account for only a percentage of total images, the long duration of Vietnam video feeds often results in more violence (in seconds) per image segment. Since the cost of securing war images today in Iraq is much lower, even commonplace, segments of all lengths are used at the discretion of the producers.

Perpetrators and targets of violence

The perpetrators and targets of violence may also matter greatly in how individuals assess their support for war. If television news stories depict American soldiers engaged in justified violence, violent images could theoretically increase rather than deflate public support. Conversely, if the targets of violence are civilians or Americans, support is likely to decrease in some cases as viewers see harm to innocents or their own people. Perpetrators and targets of violence may be all American (or allies) forces, mostly American (or allies) forces, both American (or allies) and enemy forces, mostly enemy forces, all enemy forces, or unknown. I also evaluate if civilians are involved. I measure demographic information of both targets and perpetrators. Women and children especially may have the ability to garner strong responses from television viewers.

One of the more interesting findings in the difference between Vietnam and Iraq is whom news stories portray as the perpetrators and targets of violence. While the enemy is the most often depicted perpetrator of violence in stories of both Vietnam and Iraq, violence by enemy forces is seen significantly more often during Iraq stories.

During Vietnam, the enemy is portrayed as the perpetrator of violence just 37% of the time. For stories about the Iraq war, enemy forces are depicted as the perpetrator of violence in 53% of stories. In about one-third of Vietnam stories, viewers see a mixed portrayal of violence, with violent acts committed by both American and enemy forces in the same story. Conversely, stories with both American and enemy perpetrators are seen in only one-fifth of Iraq stories.

The most frequent target of violence in stories during the Vietnam War is Americans. Americans are the sole recipients of violence in 27% of Vietnam stories. In contrast, Iraq stories seldom portray Americans as the sole target of violence (less than 9% of reports). Instead civilians are the most often reported target of Iraq War violence, singled out in 26% of all Iraq news broadcasts. Reports that feature the enemy as sole or primary target of violence are similar for both Vietnam and Iraq, at about 21% of stories.

Perpetrators and targets of violence matter because they may influence the way the public thinks about war. If many Americans do not like to see their fellow citizens as the targets of violence, graphic images of wounded American soldiers are likely to demoralize public support for war. On the other hand, images of triumph over the enemy, often accompanied by violence toward enemy combatants, may bolster American feelings of support. However, the public's reaction to violent images cannot be predicted by targets and perpetrators alone. While certain targets and perpetrators of violence lend themselves to some frames more easily than others, the frame surrounding the visuals makes a considerable impact on the viewer. Depending on the frame used, support may increase or decrease. For detailed data on this and subsequent variables, see table 2 in appendix A.

Frame of violence

While images are powerful and evocative of emotion, the frame surrounding an image often determines how a viewer responds. A violent image may draw a viewer's attention and increase response, but without context, we cannot accurately predict what kind of response will occur. Accordingly, I note whether violence is "justified" or "unjustified," as determined by the frame of the story. The most general criterion is whether the violence seeks to promote equality and freedom. Other questions may help determine the frame as well. Are the motives of the perpetrator selfish or altruistic? Are civilians purposively harmed? Do the news reporters use condemning language toward the perpetrator of violence?

Data analysis shows that network evening news programs are more likely to frame images of war in a normative fashion during the Iraq War than during reports of Vietnam. During the Vietnam War, over one-third of war images aired without being framed as justified or unjustified violence. For the Iraq War, just 12% of visuals were unframed in this way, dropping the amount of neutral image coverage by almost two-thirds compared to Vietnam.

The type of frame most commonly employed by news networks changed from Vietnam to Iraq as well. Although Vietnam and Iraq are comparable in regard to downward trends in public opinion, images of the Iraq war are more than twice as likely to contain a frame of unjustified violence. Over 66% of violent Iraq war images are framed as unjustified, compared to just 29% of Vietnam images. Images of justified

violence are significantly more likely during the Vietnam War, at 36%, than during the war in Iraq, at 22%.¹¹

The impact of framing can be seen perhaps most clearly when the same images are used and reused to tell two completely different stories. Networks do reuse video feed. The images shown do not necessarily come from the story being told. Anecdotal evidence of the reuse of video feed presented itself during coding. ABC evening news aired two stories in 2003 that used identical images. The video featured several American soldiers surrounding a group of Iraqi men. The Americans had their guns aimed at the Iraqis, while Iraqi men held their hands high in surrender. In the first story, shown at the beginning of the war in March, the reporter spoke approvingly of the Americans soldiers. She said it was “a good day” for U.S. troops, and proceeded to tell of the American soldiers’ capture of the rogue Iraqis, keeping them from inflicting future harm on American troops and innocent civilians. The second story aired months later in November, after a noticeable drop in public support for the war. This time the reporter spoke of the U.S. troops in a disparaging tone, indicating that the capture of these “innocent” Iraqi men was nothing but a self-glorifying witch hunt. Clearly, the viewer is led to entirely different conclusion about war events depending on which story is seen.

Evaluative tone

The evaluative tone of the television news reporter may also influence the impact of imagery. Frame and evaluative tone often move together (data are correlated at 0.42), such that frames of unjustified violence coincide with negative evaluative tones, or

¹¹ For detailed data on frame of violence and other variables not discussed at length in this chapter, see Table 2 in the appendix.

frames of justified violence work in tandem with positively toned reports. Nevertheless, they are distinct story elements. I measure tone as positive, negative or neutral in relation to the stated position of the President. There are advantages and disadvantages to measuring tone in this way. An important benefit of this measure is that it increases the ability to measure television news approval of the President. This will be particularly useful in Chapter 4 as I evaluate how television news influences public support for the President and his wars. On the other hand, it is possible for a story to be positive or negative, and yet coded as neutral provided the normative tone is directed at someone or something else other than the President and his administration. This measure does not code for those nuances in tone.

Data analysis of the wars shows little variation in positive tone. In both wars, networks display modest amounts of positive tone, ranging from 10-15%. However, noticeable changes exist in the negative tone displayed in stories. Reports of Vietnam were negative about 16% of the time, while Iraq reports went negative much more often, in 28% of cases.

Exposure to television news stories of war: Vietnam versus Iraq

A most basic question addressed by this research is how often has network television news covered wars in which America is fighting? If war images are to influence public opinion, they must reach the citizenry on a regular basis. Several methods exist for measuring the public's potential exposure to television news reports of war. First, I calculate the percentage of days that networks air at least one lead story about war. For Vietnam and Iraq, the coverage is almost identical by this measure, with

networks airing lead stories on war 48% of the time¹². Lead stories tend to be more frequent in the first months of a conflict. For both wars, coverage of the conflicts declined as the war continued over several years and saliency decreased.

For a more detailed measure, I also gauge intensity of war news, (0) if neither lead story is about the war, (1) if one of the two lead stories concerns war, and (2) if both lead stories center on war. This measure is the best indicator of when war activities are most salient because television news networks air stories deemed most important at the beginning of a news broadcast. If one of the two lead stories is about war, war is likely salient to the American public. If both lead stories report on war, the degree of saliency increases even further. Results show that Vietnam news featured more intense war coverage, with 27% of days airing one lead story on war and 21% of days airing both lead stories on war. Iraq coverage was more likely to feature only one lead report per day, as is the case for almost 40% of days in the sample. Just 9% of news days devote both lead reports to coverage of war.

While television news of Vietnam was more likely to offer multiple lead stories on the war than coverage of Iraq, this does not necessarily indicate a greater level of public exposure to Vietnam news. The final measure of exposure, length of news report, suggests the length of Iraq reports outlasted Vietnam reports by over 60%. The mean story length (in seconds per story) from Vietnam is 2 minutes 22 seconds, while Iraq stories average 3 minutes 50 seconds each. Median length increased by 38% from

¹² A potential bias exists because coverage of war tends to be higher in the first months of the war, and because the archive does not have data for the first 41 months of the Vietnam war. In addition to the data analysis reported above, I analyzed data from Iraq using only months 41 and greater so as to generate a sample equivalent in time to Vietnam. The results for Iraq change insignificantly, with lead stories airing on 46.96% of days, down from 48.80%.

Vietnam to Iraq. Table 2 presents information on the length of stories during the Vietnam and Iraq wars.

Table 2: Average length of Network Television News Stories of War (in seconds)

War	N	Mean	Median	Std. Dev.	Min	Max
Vietnam	184	142.6196*	130	102.7348	10	430
Iraq	243	230.9465*	180	161.0821	10	900

*Differences of means tests show differences between all wars (significant at 0.01 level).

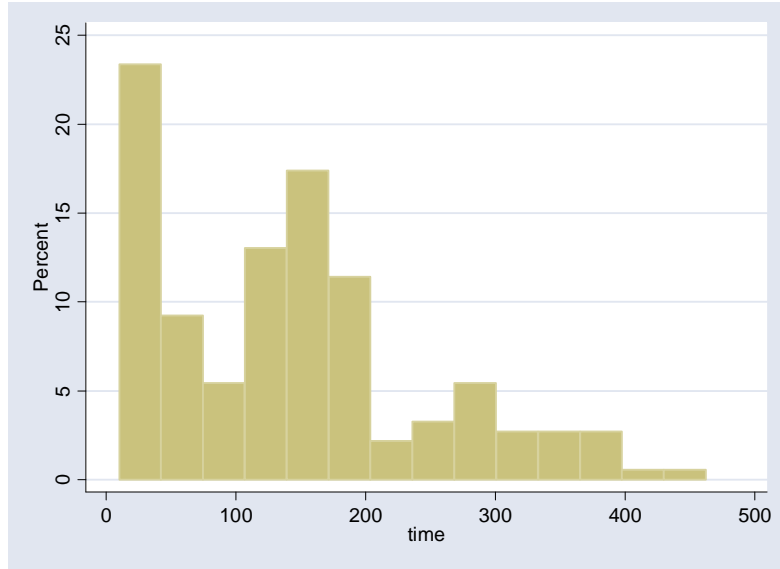
This finding may seem surprising given that previous studies show evidence of shortening television news stories. Sound bites of political figures reduced upwards of 75 percent from 1968-1988 (Hallin 1992). However, this does not appear to translate into shorter stories of war. A closer examination of the style of news during each of the wars renders some potential explanations as to why reports of war have increased in length over time.

Television news reports of war during the Vietnam era were typically very structured, with segmented stories about specific topics. For example, on ABC News on November 1, 1968, the first three stories of the newscast were about a bombing halt in the Vietnam War, initiated that morning. The first story reported the facts and reactions of current political leaders. After a commercial break, a second story told of the reactions American soldiers. Following a second series of commercials, the third report detailed the reactions of Presidential candidates. While all three stories could have easily fit under the umbrella of one story line- the bombing halt- producers chose to divide one

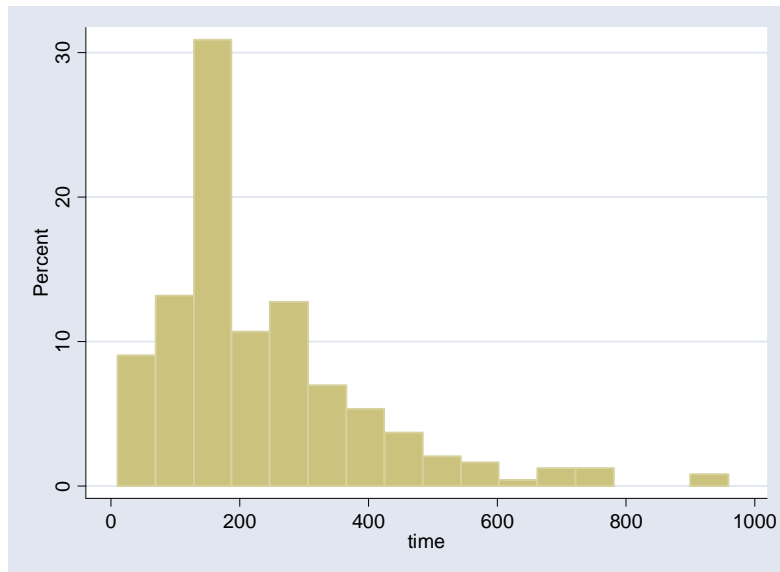
newsworthy event into three separate reports. Instead of one story thirteen minutes in length, three much shorter stories result.

Vietnam news reports from all three news networks follow this compartmentalized formula for the duration of the conflict. With fewer images to capture viewer interest, perhaps shorter stories were thought to be more in line with the attention span of the average nightly news consumer. Stories from the Iraq War, on the other hand, tend to favor an amalgamated approach. One or two stories typically encapsulate all of a day's events, united by a loosely-used catch-all like "violence" or "attacks." Unlike Vietnam reports, Iraq War stories are packed with visual content, often jumping from one scene to another.

Another reason Vietnam reports are shorter in length, on average, is the almost daily reporting of casualty numbers for both American and enemy forces. These casualty reports are isolated news stories, providing little additional information and averaging around only 20 seconds in length. Casualty reports often led a news cast because war deaths were important to the American public. However, with only projected numbers as a visual tool, these stories were not visually appealing. As such, networks often preferred to allocate more premier time to other stories, unless an especially noteworthy war event occurred. Stand alone casualty reports are rarely seen during the Iraq War. Instead, news of war casualties is blended into longer stories. Histograms of story length, separated by war, appear in Figure 12. Whereas the greatest frequency of Iraq war stories are two to three minutes in length, the most common length of Vietnam stories is under forty seconds. On the high end, the longest news story about Vietnam is only 7 minutes 10 seconds long. In the sample of Iraq stories, 9 reports exceed 10 minutes.



Vietnam War



Iraq War

Figure 12:
Histograms of length of network television news stories of war (in seconds)

Conclusion

In this chapter, I have documented the vast changes in network television news coverage of war that have occurred from the Vietnam era to Iraq, with special attention given to war images. Images offer a separate dimension of information to news consumers, an element that must be incorporated in the study of television news if we are accurately to model its effects. With the coding scheme advanced here, scholars may paint a more complete picture of television news' burgeoning influence on public opinion.

In chapter three, I expand the data set further, turning to cable presentations of war news. Using the same coding scheme developed in this chapter, I measure content from CNN and Fox News coverage of the Iraq War on the nightly news programs. CNN and Fox News are thought by many to be entrenched deeply with liberals and conservatives, respectively. The next chapter digs through stereotypes and exaggerations to determine the actual composition of verbal and visual content of the two most prominent cable news programs. I compare the cable news programs to network news as well.

While my data set will be useful for a range of studies in the fields of political science and communication, the crux of this dissertation lies in its ability to establish how these patterns affect the public's support for war. Individuals react emotionally and cognitively to visual content. As such, increasingly graphic, violent and evocative images may alter the way the public thinks about military conflict. Later, chapters four and five offer theoretical predictions of the effects of war images, derived from the

empirical content established here. In these chapters, I also turn to empirical tests of my hypotheses, using public opinion data, statistical models and an experiment.

CHAPTER III

CONTRASTING VISUALS IN FOX NEWS AND CNN COVERAGE OF THE IRAQ WAR

“It's really not news. It's pushing a point of view. And the bigger thing is that other news organizations like yours ought not to treat them that way, and we're not going to treat them that way.”

-White House Senior adviser David Axelrod, discussing Fox News¹³

“There's not a person in the world, not a sane person in the world who thinks that CNN is not as far-left liberal as anybody else in the media is, except CNN. Sometimes it seems we're all surrounded [by] general, genuine insanity.”

-Radio personality Rush Limbaugh¹⁴

The partisan nature of Fox News and CNN is a widely discussed phenomenon among many constituencies in American society. Conventional wisdom says that Fox News is a figurehead of Republican conservatives, while CNN promotes a distinctly liberal agenda. Political elites, like David Axelrod and Rush Limbaugh in their quotes above, frequently laud the so-called extreme positions of the other side. Academics also acknowledge the partisan divide within cable news. Dr. Jay Rosen, a New York University professor of journalism, states,

“Everyone realized at once...how much sense the more partisan system made. There is an inescapable logic to it. The whole political scheme that journalists thought they had settled forever with this pact they called ‘objectivity’ is not working. The press will have to become more political (Johnson 2004).”

¹³ Comment made by David Axelrod on ABC Morning News, October 18, 2009.

¹⁴ Comment made by Limbaugh on The Rush Limbaugh Show, November 10, 2010.

The public espouses similar beliefs about the ideological tendencies of the two networks as well. In a telephone survey by the Pew Research Center, the greatest percentage of respondents (37%) said they thought CNN cable news was mostly liberal, while only 11% indicated that CNN was mostly conservative. In regard to Fox News, almost half (47%) thought the network was mostly conservative, compared to just 14% who said it was mostly liberal. Figure 13 shows these results.

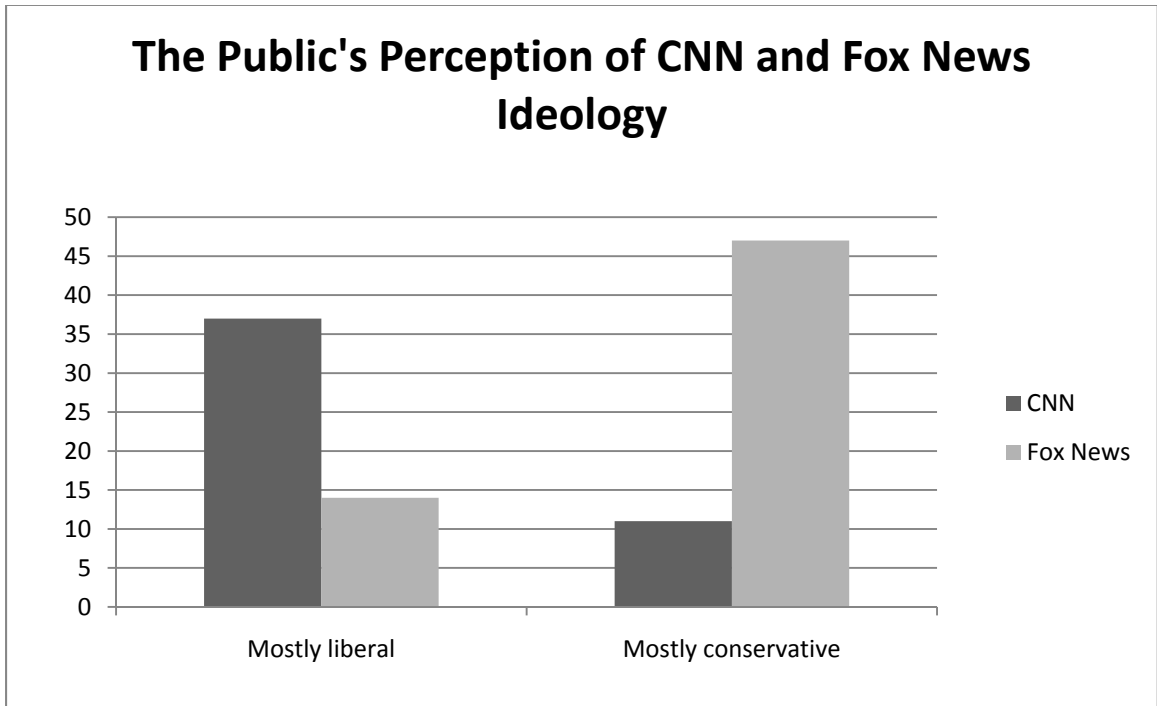


Figure 13: The public's perception of CNN and Fox News ideology

Survey data by Pew Research Center for the People & the Press. Methodology: Conducted by Opinion Research Corporation, October 23 - October 26, 2009 and based on 1,001 telephone interviews. (iPoll)

Question wording:

As I read a list of news networks, please tell me if you think each is mostly liberal, mostly conservative, or neither in particular.

...The Fox News cable channel

...CNN cable news

Based on CNN and Fox News' reputations, we might expect the two networks to produce dramatically different news reports on war. Looking specifically to potential differences in the networks portrayals of violence, there is reason to think imagery would be different between the two as well. If violence decreases public support for war, and if Fox News acts as an agent for George W. Bush and the conservatives, we would anticipate Fox News to produce less violent images of the Iraq war in its news reports. Conversely, as a liberal opponent of the Iraq war, CNN would have an incentive to show viewers more graphic images of violence.

Does empirical evidence support this popular belief? Do CNN and Fox News often choose radically different approaches in broadcasting images of war violence? Or do the cable news networks largely produce similar images of war, in both amount and degree? Their decisions may have important consequences for how the public thinks about war.

In this chapter, I evaluate differences and similarities in Fox News and CNN coverage of the Iraq war in their evening news programs, devoting special attention to violent news images. These data are important in measuring the information environment available to American voters. The information environment available to citizens is significant because it determines the amount of political knowledge that voters can glean from the consumption of television news. Furthermore, the documentation of differences in television media here will provide the basis for analyses in subsequent chapters of this dissertation.

Contrary to prevailing sentiments, analysis of an original data set determines that the evening news programs of CNN and Fox News tend to show images of war violence

with similar frequency, severity and explicitness. Surprisingly, there are only slight differences in the images viewers see on either network. Another unexpected finding emerges when comparing Fox News and CNN to network news programs. While we might anticipate cable news programs to be more extreme in their presentations of violence, they actually offer significantly less violent images of war.

Notable differences do exist, however, in non-visual components of the news: length of stories, tone and frame of violence. Even so, given that conservatives and liberals alike frequently attack the other side as politically radical, the real story is more moderate. Variation certainly exists between Fox News and CNN, but not to the extent that many critics or the public would expect.

With attention to television news reports of war, this chapter offers two important contributions. First, by using the original coding method explained in chapter 2, I capture the power of war images on cable television news. The original content analysis of cable news program on the Vanderbilt Television News Archives should add a rich and nuanced body of evidence, documenting portrayal of war across two cable networks over the course of the Iraq War. Second, I offer empirical evidence of differences between the presentation styles and content of the two networks, including how the ideological leanings of CNN and Fox News affect their presentations of war. Portrayal of war across networks is of significant interest to scholars in this age of increasing media polarization, and these findings are especially interesting as they do not match with the commonly held view of severe differences between cable choices.

The chapter proceeds as follows. First, I offer a summary of the debate in the discipline regarding the relationship between partisanship and cable news. Next, I

present and discuss findings of the content of war images on CNN and Fox News, as well as some non-visual characteristics. I also compare cable news presentations of war to network news broadcasts. Finally, I discuss the implications of this research and explore future research possibilities.

Partisanship and cable news polarization

According to studies by the Pew Research Center (2009)¹⁵, consumers of cable news exhibit strong partisan preferences. There is a widening gap in partisan differences between viewers of both CNN and Fox News. The number of Republicans (34%) who say they get the majority of their national and international news from Fox News outnumbered Fox's Democrat (10%) consumers by roughly three and half times. In the same way, Democrats cite CNN as their preferred news source over Republicans at a margin of more than two to one (29% vs. 13%). Table 3 presents these survey data.

Fox News and CNN represent only a subset of the many options available to today's citizen. Growing choice in media outlets causes individuals to be more isolated and less unified in their common beliefs and political behaviors (Prior 2005). Indeed, Fox News and CNN are less polarizing options than many programs, especially entertainment-oriented soft news programs like the satirical *Daily Show* or *The Colbert Report* (Baum 2003). Nevertheless, Fox News and CNN remain known for their partisan viewpoints. Fox News is both loved and hated for its widely-touted conservatism and generally favorable portrayal of Republicans. CNN is renowned for its more liberal interpretations.

¹⁵ Previous studies, including those conducted by the American Society of Newspaper Editors (1999), The Gallup Organization (2003), and an earlier study by the Pew Research Center (2005) reported similar results.

Table 3: Partisanship of Cable News Consumers¹⁶

Main source for national and international news		July 2003	June 2005	July 2007	July 2009
Fox News	%		%	%	%
Total	22	16	17	19	
Republican	31	26	28	34	
Democrat	17	11	11	10	
Independent	21	14	16	19	
<i>R-D gap</i>		+14	+15	+17	+24
CNN					
Total	27	18	16	22	
Republican	26	15	13	13	
Democrat	32	21	21	29	
Independent	24	18	14	20	
<i>R-D gap</i>		-6	-6	-6	-16

Is CNN “the most trusted name in news” with “the best political team on television,” as its slogans suggest? Is Fox News “fair and balanced,” as it proudly decrees at the beginning of each broadcast? Many viewers and critics are doubtful, but partisan views on the evening news may not be as pronounced as frequently believed. Because both CNN and Fox News offer a range of programming, only a minority of which is devoted strictly to daily news, the rumored content of each network’s national evening newscasts is often convoluted with other broadcasts that focus more on political commentary. For example, the fact that Fox’s “chat consistently tilts to the conservative side may cast an unwarranted cloud on the news reporting, which tends to be straightforward” (Kurtz 2001). A similar story might exist for CNN.

¹⁶ Data from The Pew Research Center for the People and the Press, results from telephone interviews of a nationwide sample.

Indeed, a large body of research suggests the content of those programs devoted strictly to television news- including those on cable networks- are not ideologically biased (Bennett and Entman 2001; Graber 1980; Iyengar 1991; Iyengar and Kinder 1987; Robinson and Clancey 1985; Robinson and Sheehan 1983). More recent work challenges this notion that no bias exists in television news, but there is not consensus on the direction of existing ideological forces. A study by the Program on International Policy Attitudes (PIPA) (2003) provides reason to believe that Fox News viewers are subjected to conservative bias. On the other hand, work by Groseclose and Milyo (2005) claims that almost all news media¹⁷ demonstrate bias toward liberal preferences. But perhaps even more telling than actual bias is the perception that it permeates cable news. A recent study (Turner 2007) shows that simply attaching a “Fox News Channel” or “CNN” label to a news story is sufficient to send an ideological signal to a viewer. This kind of signal can lead viewers to perceive bias even when it does not exist. The range of findings on cable news bias indicates the need for further work on this topic.

In many ways, cable news is not so different from network news programs. Even if a cable network is known for a certain ideological viewpoint, news programs are constrained by the news itself. Individuals watch news programs because they want factual information on current events in the world. Cable news and network news alike must cater to that desire or risk losing viewers. Whereas people take political commentary with a grain of salt, news is intended to be authoritative. Cable commentary on CNN or Fox News may display relatively large levels of political bias while strict news programs remain largely untouched. The biggest difference between cable news and network news is length; cable news programs are an hour, while network news last

¹⁷ They note exceptions as the Washington Post and Fox News Special Report with Brit Hume.

for only thirty minutes. As such, the cable networks have time to discuss events in greater detail with a higher number of news personalities.

Though strict news programs constitute a minority of total cable news options, there are compelling reasons to study them. First and foremost, this study seeks to examine violent images in television news. Cable news is important in informing news consumers about war, and evenings news programs are much more likely to contain violent images than chat-oriented shows. Second, CNN and Fox News evening news programs both occur in prime time (7-10 p.m.), the most-watched period for both cable networks. Third, the evening news programs of CNN and Fox News are similar enough to traditional network news programs (ABC, CBS, NBC) to make interesting comparisons, both over time and across networks.

Simply because CNN and Fox News are thought to lean toward opposing ideological poles does not necessarily mean that they portray news worthy events in meaningfully different ways. It is possible that their political commentary may, at least for the most part, stay out of evening news programming. If such is the case, commonly held assumptions about ideologically-based differences in CNN and Fox News programs are misplaced. Furthermore, if the networks share commonalities in their news programs and images, the effects of news images may generalize across networks.

Research design

I conduct an original content analysis of the Vanderbilt Television News Archives, evaluating lead stories about war from the national evening news programs from Fox News and CNN, the two leading cable news networks. How much does

television news coverage of war actually vary between Fox News and CNN? Using the same original coding scheme explained a length in the previous chapter, I assess changes in presentation of war news on cable networks.

While this study is primarily concerned with images of war violence on cable news, a secondary goal is to compare the content of CNN and Fox News stories of war more broadly. Which cable network offers more coverage of the Iraq War? How often do the networks make the same decision to cover/not cover the day's war events? I also examine the ideological tilt of each network. How conservative are Fox News reports of war? How liberal is CNN news? How does cable news coverage of war compare with network news coverage of war? How do these components influence the total amount of information available to voters?

The random sample (in days) from the Iraq conflict has an N of 200 for both Fox News and CNN. I use only one sample (the same days for each network) so as to directly compare each day's coverage between networks. Footage from the Vanderbilt Television News Archive is only available from January 15, 2004; consequently evaluation of the Iraq War began at that time and continues through December 31, 2007. I code only lead news stories, or the first two substantive news stories of a broadcast. Since most Americans usually pay little attention to political news of any kind (Althaus 2007, Price and Zaller 1993), lead stories are most likely reach the mass public. Additionally, news networks order stories by importance. By evaluating lead stories instead of all stories, I am able to observe when war is most salient.

Results

Analyses of the data show that CNN and Fox News coverage of the Iraq war are predominantly similar in the images they broadcast. Largely, depictions of violence and violent imagery remain constant across the two networks, with a few exceptions that will be discussed in detail below. However, differences between CNN and Fox News are evident in regard to some characteristics of their programming. One of the most notable variations exists between whom the networks show as perpetrators and targets of violence. Differences in war coverage between the two networks is also apparent in comparisons of story length, where CNN stories tend to outlast those on Fox News by a margin of more than two to one. The networks tend to display contrasting evaluative tones as well. While the use of positive tone is rare for both cable outlets, CNN uses a negative tone much more frequently than does Fox News. Interestingly, both story length and tone are variables that are independent of visual information and factual events.

Coverage of war

Before a comparative evaluation of cable news content, it is useful to analyze when CNN and Fox News choose to broadcast lead stories about the Iraq War. How often do both networks act together in their decisions to lead their programs with Iraq news? How often do they make the same decisions *not* to lead with Iraq news? When and how often does the decision to cover Iraq war news vary between CNN and Fox News? Does one cable network show more ownership of the Iraq War as an issue?

Largely, CNN and Fox News seem to have similar opinions about which events in Iraq are newsworthy. In over 71% of the sampled days of news coverage, CNN and Fox

News made the same decision about whether or not to lead news with a story on Iraq. Given the large number of potential new stories, and that this analysis only considers the first two substantive stories of a news broadcast, this degree of comparability is quite high. For 44% of the sample, neither network led with Iraq News. For 27% of the sample, both networks produced at least one of their two lead stories on the Iraq War. The networks diverged in their war coverage in slightly more than one-fourth of the sample. CNN airs lead Iraq stories (when Fox News does not) 10% of the time. Fox News leads with this war news (when CNN does not) 18% of the time, broadcasting slightly more stories on Iraq than CNN. Figure 14 presents these results.

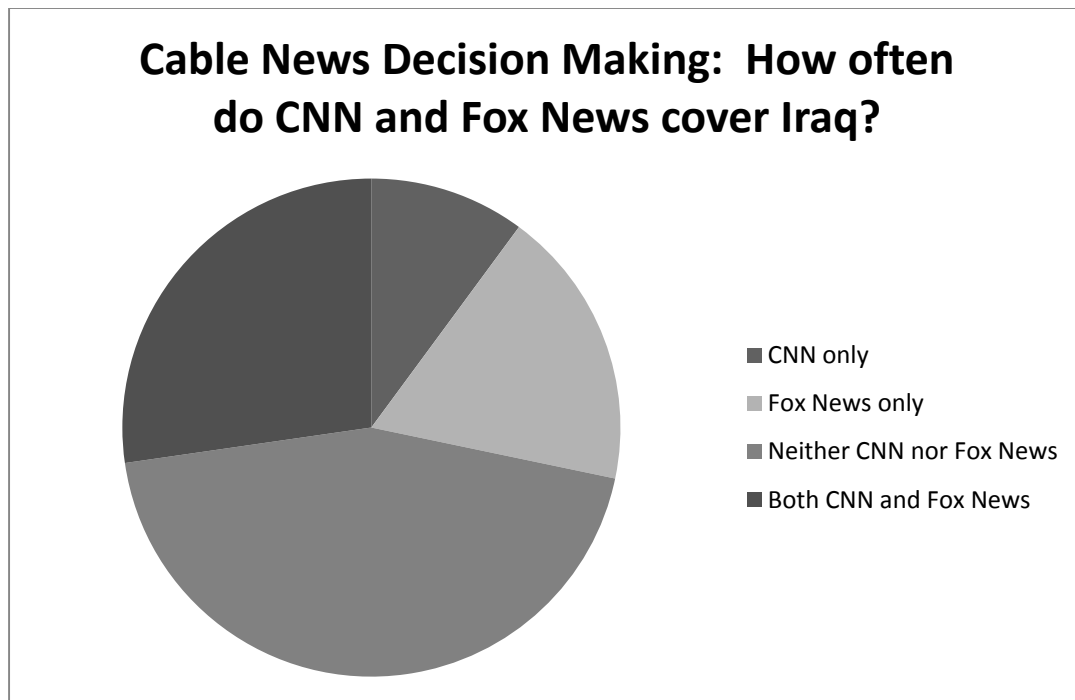


Figure 14: Cable News Decision Making

71% of stories: CNN and Fox News make the same decision; both cover/do not cover Iraq.

29% of stories: CNN and Fox News make different decisions; one covers, one does not.

Overall, CNN leads its nightly news program with news of Iraq on 37% of days. Fox News offers viewers modestly greater coverage of Iraq, beginning its evening program with Iraq War news on 45% of days. Nevertheless, a t-test shows no statistically significant differences between the two means. Thus, we can conclude that neither cable network emerges as the clear owner of the Iraq War as an issue. While consumers of Fox News may see slightly more news on the war than their CNN counterparts, viewers are likely to receive roughly the same amounts of war coverage regardless of their choice to watch the evening news on CNN or Fox News.

Story length

The most easily observable difference between CNN and Fox News reports of war is in length of story. Table 4 presents these data. The average CNN story on Iraq is 6:52, lasting more than twice as long as the average Fox News story at 3:14. CNN stories frequently last more than ten minutes, with the longest story in this sample clocking in at 18:30. On the other hand, the longest Fox News story stayed well under the ten-minute mark at 8:20. The large difference in story length between CNN and Fox News in their presentations of the Iraq war is a symptom of a larger trend: CNN gives viewers more information. With a few exceptions, a seven-minute long story of war tells viewers more about a day's war events than a three-minute story.

An example of how length of story may affect viewer perceptions of war is helpful to illustrate the importance of story length differences. Let us contrast CNN and Fox News coverage of an anecdotal war event that made news headlines. On May 1, 2004, both CNN and Fox News lead their newscasts with stories on Iraqi prisoner abuse

by American and British military forces. This news came on the heels of a recently released fifty-three page internal US Army report, covered by *The New Yorker* magazine, as well as a story and photographs of prisoner abuse in the British newspaper *The Daily Mirror*.

Table 4:
Average Length of Stories about the Iraq War: CNN versus Fox News

	Mean length	Std. Dev.	Minimum	Maximum
CNN	6 minutes 52 seconds	283.98 seconds	10 seconds	18 minutes 30 seconds
Fox News	3 minutes 14 seconds	102.25 seconds	20 seconds	8 minutes 20 seconds

CNN devoted seven minutes to the story. Its story began with graphic photos of the prisoner abuse, showing naked Iraqi prisoners in sexually compromising positions, being urinated on, beaten or undergoing other acts of torture. The coverage described the pictures as “sadistic, blatant and wanton criminal abuses.” CNN then showed clips of interviews with prominent leaders of various political, military and nonprofit organizations, all of whom commented on the abuse. These included British General Michael Jackson, British Prime Minister Tony Blair, Amnesty International representative Neil Durkin and former British Ambassador to Iraq Harold Walker. The report concluded with an in-depth interview with Duke University professor and former Air Force attorney Scott Silliman, who detailed the different facets of the prisoner abuse problem, from public relations among coalition members to Muslim sensitivity to nudity. In all, the report featured comments from five different public officials or experts.

Viewers took away not only the shock of graphic pictures, but an understanding of their implications to various populations.

The Fox News story on the same topic was far less detailed, lasting for slightly more than a minute before moving to other Iraq events. Like the CNN story, the Fox News report began with references to stories in *The New Yorker* and *The Daily Mirror*, and showed the same photos of prisoner abuse. While CNN described the abuse generally, Fox News talked about it using specific language, such as “sodomizing with a broomstick.” Fox News featured only one interview, a brief statement by Tony Blair; a quote from an unnamed British general was also used. No other public officials or experts were included in the story. Although the same images were shown in both CNN and Fox News reports, the shorter Fox News story gave viewers less contextual information about the wider ramifications of the pictures. As such, while CNN and Fox News viewers both saw the same images about prisoner abuse, the amount of factual and contextual information received was quite distinctive.

This anecdotal evidence of CNN’s greater reliance on expert opinion and interviews of political leader compared to Fox News is representative of the data as a whole. CNN also uses more reporters per story than does Fox News. The median CNN war news report features two CNN reporters, while the median FOX war story uses only 1 reporter¹⁸. This again illustrates that the average CNN story offers viewers more information and more perspectives on war issues than the typical story from Fox News. The implication of this variation is that viewers of CNN will garner greater levels of political knowledge, at least in regard to the Iraq War, than viewers of Fox News.

¹⁸ Mean number of reporters per story for CNN is 1.77. Mean number of reporters per story for Fox News is 1.51.

Heightened levels of political knowledge are associated with a range of political phenomena, including voter turnout and other forms of political participation (Prior 2005).

While the offering of more information might seem a presumably desirable feature of CNN, CNN lags consistently behind Fox News in cable news ratings (Bauder 2009). The differing information environments of Fox News and CNN give viewers two distinct options when selecting where to watch news programs. Fox News' reputation as the entertainment-oriented option may hold some truth. It serves a role for viewers that do not possess or seek high political knowledge (i.e., most of the citizenry, Zaller 1992 and many others) as the less intensive television option, whereas CNN provides a more extensive information atmosphere.

The mean length of network news reports is very comparable to the length of Fox News reports, clocking in at an average of 3 minutes 19 seconds, just 5 seconds longer than Fox. Still, given that network news programs are thirty minutes rather than an hour, the percentage of news coverage devoted to war on Fox News is roughly half that of network news programming. CNN stories dwarf all other evening news options in regard to length of report in minutes. As a percentage of total news time, however, CNN and network news devote similar percentages of coverage to war. Still, the decision between CNN and network news options may come down to decisions regarding the degree of total information sought by news consumers, where CNN provides twice the amount of time in which to package potential knowledge. As such, these results again speak to differences in the information environment of various news options.

Images

First, let us broadly examine the visual component of the two cable networks' portrayals of violence in the Iraqi conflict. I evaluate images of violence according to the same criteria and method established in chapter two, coding violence on five dimensions: 1) personal injury, images in which an aggressor causes or attempts to cause physical injury or death to another person; 2) death; 3) explicitness of violence, the amount of distance with which physical aggression is shown; 4) graphicness of violence, the amount of blood, gore or dismemberment shown; and 5) length of violence, the time (in seconds) that violent images appear in a story¹⁹. For the first four measures, I code for the most severe depiction of violence in each story.

Results show that violent images are *not* ubiquitous in cable news coverage of war. Table 5 summarizes the key findings in detail. Images of personal injury, death and graphic violence appear in only one-third of stories or less. Although most stories convey factual information about violence, a much smaller percentage of reports show viewers images of the referenced aggression. For example, 63% of stories, for both CNN and Fox News, reference casualties, but only 11% (Fox News) to 15% (CNN) of stories show viewers images of those deaths.

Difference of means tests are used to determine if CNN and Fox News vary from one another in meaningful ways in the images of violence they show. Of the four measures of violence in news imagery, CNN and Fox News are alike in three of them—portrayal of death, explicitness of violence, and graphicness of violence. The networks vary somewhat in their portrayal of personal injury. But, interestingly, the differences are only statistically significant in regard to the images the networks do *not* show. Almost a

¹⁹ For detailed information on the coding of these and subsequent variables, refer to chapter 2.

Table 5:
Content analyses of violence in Fox News and CNN coverage of the Iraq War, sample of evening news broadcasts 2004-2007

			CNN	Fox News	CNN Diff.

% stories with images of personal injury					
	No personal injury		17.33	32.26	-14.93**
	Assumed injury, no images		50.67	33.87	16.80***
Mild	injury images	4.00		9.68	-5.68
Moderate	injury images	16.0	0	11.2	9
Severe	injury images	12.0	0	12.9	0
% stories with images of death					
No	death	36.0	0	37.1	0
Death	referenced, no images	49.3	3	51.6	1
Dead	bodies shown	14.6	7	11.2	9
Moment	of death shown	0.00		0.00	0.00
% stories with images of explicit violence					
No	violence	12.0	0	19.3	5
Violence,	no images	16.0	0	16.1	3
Violent	images from a distance	1.33		4.84	-3.51
Violent	images up close	70.6	7	59.6	8
% stories with images of graphic violence					
No	images of blood or gore	73.3	3	70.9	7
Mild	images of blood or gore	9.33		9.68	-0.35
	Moderate images of blood or gore		6.67	8.06	-1.39
Severe	images of blood or gore	10.6	7	11.2	9
Perpetrator of violence					
Am	erican (and/or allies)	33.3	3	14.0	0
	Enemy forces		36.36	56.00	19.3
Civilians		0.00		2.00	-2.00
Mix		30.3	0	28.0	0
Target of violence					
All	American (allies) forces	16.6	7	6.00	10.6
	Mostly American (allies) forces		12.12	30.00	-17.88**
	Both American and enemy forces		25.76	4.00	21.76***
Mostly	enemy forces	10.61		10.00	0.61
All	enemy forces	13.6	4	6.00	7.64
	Only civilians		10.61	28.00	-17.39**
Target	unknown	10.6	1	16.0	0
Civilians among targets of violence					
	No		63.64	28.00	35.64***
	Yes		36.36	72.00	-35.64***

All numbers are percentages. * $p < .10$, ** $p < .05$, *** $p < .01$

third of Fox News stories involve no portrayal of personal injury whatsoever, while CNN broadcasts significantly more stories that involve some type of personal injury. Half of CNN stories allude to personal injury but do not show viewers images of harm. There are not meaningful differences in the actual images of injury, be they mild, moderate or severe.

When evaluating the full range of news choices, it is useful to determine how cable news options compare to the traditional news networks of ABC, CBS and NBC. Although cable news programs are quickly gaining ground on network news in attracting viewers, the three major networks remain popular for viewers of television news. It should be noted that ABC, CBS and NBC systematically portray war in ways similar to one another. While these major news networks have become much more graphic and violent in their presentations of war over time, as shown in the previous chapter, analysis of data suggests they evolved together. T-tests were used to analyze difference of means for 14 different variables during each of the three wars. Each network's news coverage was compared to both other major networks, with separate comparisons for the Vietnam War and Iraq War. Previous studies have shown that these networks vary little in their substantive news coverage (Gans 2004), but this study is among the first to compare *visual* content across the major networks. For both wars studied, ABC, CBS and NBC offer substantively similar content to one another, both in regard to verbal and visual information. Little evidence suggests this trend will subside. Tables of results are presented in appendix B.

Data on cable news images of war violence contrast sharply with equivalent network news reports of Iraq. Table 6 shows a summary of violent war images in

network television news coverage of Iraq compared to the same images on CNN and Fox News. Network news²⁰ programs contain much more violent images than CNN and Fox News. These differences are substantively and statistically significant. Network news contains roughly 70% more images of personal injury than CNN and Fox news. Viewers who watch network news see injury in well over half of stories, compared to less than one-third on CNN. Cable news reports show less than half the images of death and a third fewer images of graphic violence compared to network news.

Table 6: Violent war images in television news coverage of Iraq:
Network news versus cable news*

Violence Measure	Network News	CNN	Fox News
Images of Personal Injury	56.38%	32.00%	33.87%
Images of Portrayal of Death	31.28%	14.67%	11.29%
Images of Explicit Violence	72.84%	72.00%	64.52%
Images of Graphic Violence	44.44%	26.66%	29.03%
Average Length of Violent Images	18.22 seconds per story	19.27 seconds per story	12.18 seconds per story

*These data reflect the percentage of war stories containing images of violence. All images in television news reports are included, regardless of severity.

Perpetrators and targets of violence

Though CNN and Fox News tend to show viewers similar war images, the two networks vary more noticeably in whom they depict as perpetrators and targets of violence. CNN tends to show a relatively higher number of Americans as the perpetrators of violence, while Fox News offers portrayals of the enemy as the aggressor

²⁰ Because data analysis showed no differences in ABC, CBS and NBC in images of war violence in television news, I aggregate the three together as “network news” for the sake of further comparisons in this chapter.

in over half of its stories. Likewise, Fox News tends to portray American forces or their allies as the targets of violence, while CNN shows a combination of American and enemy forces as victims. Table 5 shows these data. Indeed, compared to Fox News, CNN shows more than six times the percentage of stories in which both American and enemy forces are targeted within the same story.

Furthermore, a stark contrast exists between cable news depictions of civilians as targets of violence. Fox News almost triples CNN in stories in which civilians are the sole targets. In news where civilians are among the victims, the distinction remains evident. CNN stories include civilian targets 36% of the time, while Fox News discusses civilian victims in 72% of all stories. Relatively few news scenarios exist in which civilians deserve the harm that comes to them as targets of war violence. Most often they are portrayed as innocent bystanders, or at a minimum as collateral damage.

Network news decisions of whom to depict as perpetrators and targets of violence typically fall in the middle ground between CNN and Fox News. If the percentage of time that a news station elects to portray x as a perpetrator of violence were a rung on a ladder, network news almost always occupies a rung between CNN and Fox News. See Figure 15. Network news programs tend to alternate between whom they portray as perpetrators and targets of violence to a greater degree than CNN and Fox News.

Tone

The greatest distinctions between CNN and Fox News exist in non-visual depictions of war. Table 7 presents these results. As anyone who has come across CNN and Fox News stereotypes might expect, a comparison of tone of the two networks yields

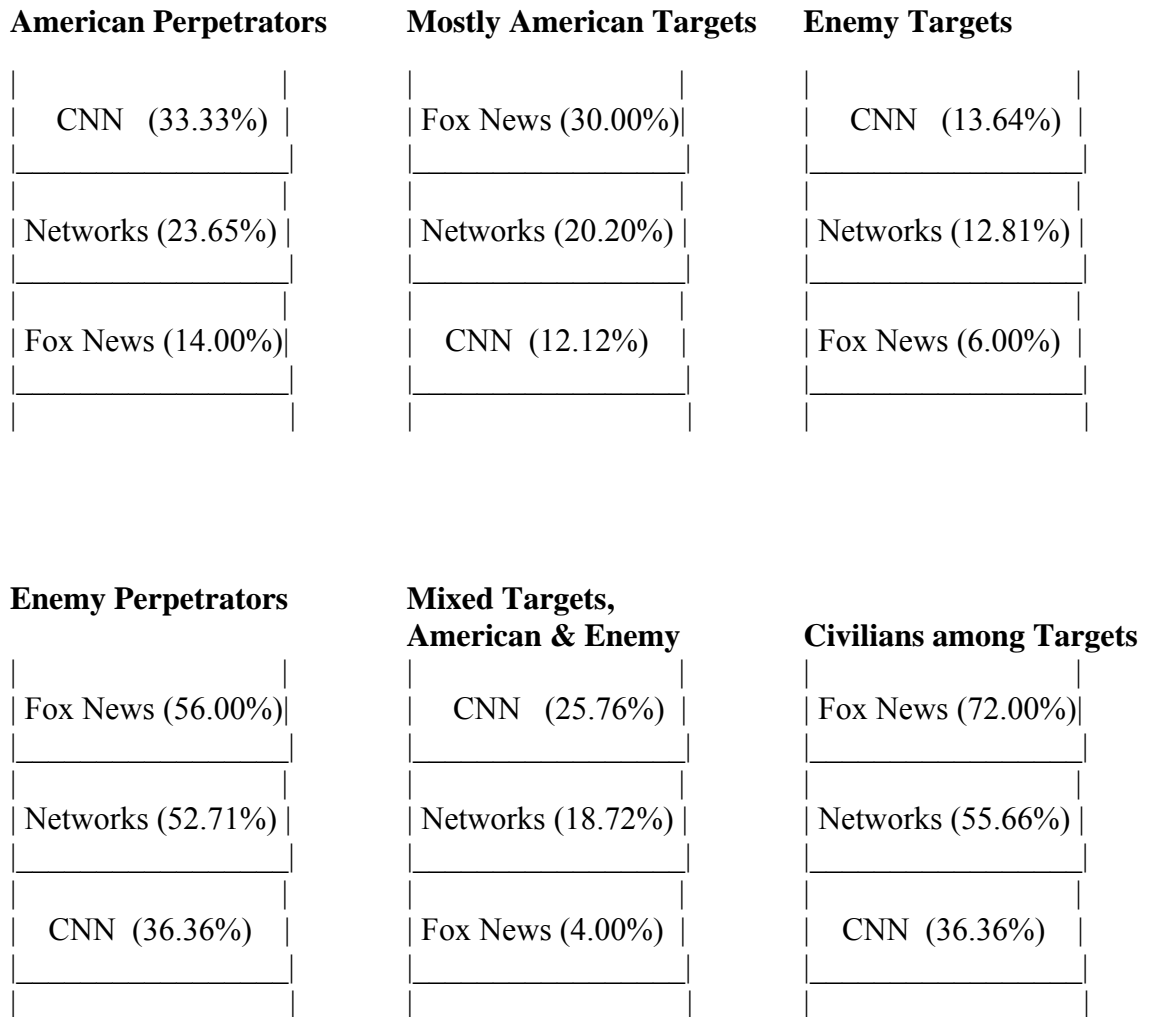


Figure 15: Network news shows more moderate presentations of perpetrators and targets of violence than Fox News and CNN

a severe contrast. I define tone as positive, negative or neutral in relation to the stated position of the President. However, the differences do not manifest themselves in the ways we might expect. Fox News is not the omnipresent advocate of the President. On the contrary, positive tones are scarce commodities indeed in cable news broadcasts, for both networks; news tends to be negative. Instead, the stories differ in whether they tend to be neutral (Fox News) or covary between negative and neutral (CNN). Fox News remains neutral in regard to the President about 84% of the time, while CNN is equal parts neutral and negative (49%). We might expect little positive tone given that popularity for the Iraq War fell relatively quickly, and these data do not begin until 2004.

Table 7:
Content analyses of non-visuals in Fox News and CNN coverage of the Iraq War, sample of evening news broadcasts 2004-2007

	CNN	Fox News	CNN Diff.
% of days with ≥ 1 lead story about the Iraq	39.06	45.59	-6.53
% of Personal Interest Iraq stories	3.00	0.00	3.00
% of stories reporting casualties	62.67	62.90	-0.23
Tone ²¹			
Negative	49.33	12.90	36.43***
Neutral	49.33	83.87	-34.54***
Positive	1.33	3.23	-1.90
Frame of Violence			
Unjustified Violence	50.67	69.35	-18.68**
Justified Violence	6.67	1.61	5.06
Unknown/ mixed frame	42.67	29.03	13.64*

All numbers are percentages. * $p < .10$, ** $p < .05$, *** $p < .01$

²¹ In relation to the stated position of the President and/or members of his administration

As discussed in chapter 2, there are benefits and drawbacks to measuring tone in relation to the President and his administration's position. Because I am most interested in television news approval of the President and his wars (see chapter 4) as it relates to public approval, it is important to have a measure that accounts directly for the executive. However, the measure may miss negatively tone reports in which the normative voice is directed at an entity other than the President.

A comparison of network news tone to the tone of CNN and Fox News during the same period of time is both expected and surprising. Expectedly, network news is less critical of conservative President George W. Bush than CNN (49.33%) and more critical than Fox News (12.90%), taking a negative tone toward the President in just over 30% of all stories. Network news is neutral in regard to the President 61% of the time, compared to 49% for CNN and 84% for Fox News. Surprisingly, network news takes a positive tone toward the President and his administration almost three times more than Fox News (8.90% vs. 3.23%). Given Fox News' conservative reputation, one might expect Fox News to praise the President more often than in 3 out of 100 reports, or at least as much as network news. This result again points to the fact that strict news programs are inherently different from political commentary. Fox News' reputation for conservative pundits unfairly colors their news reporting, which, contrary to popular belief, is not overtly conservative.

Frame of violence

Emotionally-charged images of violence grab viewer attention, but we cannot understand how images affect the public without a consideration of the frame of violence.

The way news anchors and reporters talk about violent images helps viewers interpret the visual information, creating a frame. Was the violence necessary to move the Iraq society toward freedom and equality? Was it a means to an end for a better life for Iraqis? Were the motives of the perpetrator altruistic? If the answer to these questions is yes, the frame employed is that of justified violence. Alternatively, were civilians purposefully harmed? Were the motives of the perpetrator selfish? Does the reporter condemn the actions of those involved? If so, a frame of unjustified violence is in place.

Considering that CNN tends to enact a relatively negative tone compared to Fox News, we might expect CNN to frame the violence in its stories as more unjustified than Fox. Data analysis shows that such is not the case. Fox News frames its stories as unjustified violence significantly more often than CNN. This finding goes hand-in-hand with findings of perpetrators and targets of violence. If Fox News portrays the enemy as the sole executor of violence in more than half of its segments, it holds that this type of violence would not further the cause of democracy and freedom. Nevertheless, it is important to remember that a frame of unjustified violence may not necessarily deflate support for war. If the enemy is unjustified, viewers may conclude a greater presence of American forces is necessary to combat enemy offenses, thus supporting the conflict.

The reputations of CNN and Fox News as partisan organizations might lead us to think they would be more likely to frame violence as justified or unjustified compared to network news programs. However, the opposite is actually true. Network news frame violence in more than 86% of its stories, most often as unjustified violence (75.63%). Fox News frames its violence in 70% of stories, and CNN frames 57%. CNN gives viewers the fewest frames of violence. However, this is most often the result of the use

of mixed frames rather than abstaining from framing altogether. When both justified and unjustified frames of violence are offered to similar degrees in the same story, the meaning taken away by a viewer is unclear. As a result, these stories are not coded as containing a justified or unjustified frame of violence. Though the cable networks do not incorporate violence frames as often as network news, they still use them a majority of the time. Most often CNN and Fox News prefer frames of unjustified violence, using them in 51% and 69% of Iraq reports, respectively.

Reporting of casualties

CNN and Fox News do not differ systematically in their reports of casualties. The two networks offered almost identical percentages, including news of casualties in their reports of war in just under 63% of cases. The almost identical incidence of casualties suggests the cable networks are reacting to and reporting on war events. Casualties are facts. It is difficult to ignore them and inconceivable to report them inaccurately while maintaining journalistic standards. The cable networks' casualty reports mimic those of network news, who report casualties in 67% of stories.

Discussion

Regardless of one's own preferences, likes or dislikes of CNN and Fox News, both networks seem to be grounded with a foundation of reports on actual war events. Unexpectedly, the nightly news programs of the two cable networks are alike in many ways. The remarkable similarity of data with respect to reports of casualties suggests that both networks do center reports on the day's war happenings. CNN and Fox News make

the same decisions about whether or not to report on the Iraq War over 70% of the time, again indicating that their news programs are constrained by the news itself. They also show violence with the same degree of frequency, severity and explicitness. In light of conventional wisdom regarding Fox News' fanatical conservatism and CNN's pronounced liberalism, the finding that both cable networks use less violent imagery than network news programs should come as a surprise. We tend to think of cable networks as extreme conveyors of news, and yet their images are far from extremist, and even less so when compared to network news.

Nevertheless, CNN and Fox News do differ with their news broadcasts in some important ways. The much longer length of CNN stories compared to Fox News (and network news) suggests their reports give viewers a higher amount of information. CNN's relatively negative tone toward the President and his administration stands in opposition to Fox News' neutral tone. The finding that Fox News employs a neutral rather than positive tone again points out flaws in popular beliefs, which would have expected the latter. The two networks also differ in the ways they frame violent war events, with Fox News portraying war violence as unjustified behavior significantly more often than CNN. All of these differences may impact a viewer's perception of whether or not to support military conflict.

While conventional wisdom might lead one to believe that CNN and Fox News play a central role in bringing about increased polarization in American politics, these data suggest this may not be the case. Indeed, it may be that the news programs of the two cable networks are merely a reflection of existing polarization. Why might this be the case? Due to high levels of communication technology and easily available

information about war events, the cable networks are forced to share many commonalities. CNN and Fox News share in the information they broadcast. They share in the images they show. Their choices when reporting daily news are somewhat limited by these shared constraints, resulting in ideological moderation of news reports.

Overall, these data suggest that widely held beliefs about the content of CNN and Fox News are somewhat misguided. While this study cannot speak to the political commentary programs of each network, the content of their news programs are the same in many ways. They do not display very high levels of ideological bias as supposed by political elites and the public. As one of the first studies to compare the content of a large sample of cable news programs from the same period of time, these data clarify misconceptions about Fox News and CNN, as well as differences in the information environment provided by each. The study's documentation of disparities between the two cable networks also can serve as a foundation for future investigations.

Indeed, the rest of this dissertation will examine the implications of two cable networks' differences from each other and from network news offerings. The variation in visual content among CNN, Fox News and network news- both in the images themselves and how they are situated within a story- highlights the reality that viewers receive varying information on wartime happenings depending on which station they watch. Do these differences matter in how individuals react to war? As war images on television news change, both over time and from network to network, does public support for war change as well?

The following chapters seek to address these questions. In chapter 4, I combine longitudinal public opinion data with collected data from chapter 2 to analyze the effects

of violent imagery in television news on aggregate public opinion. Reactions to violent war imagery are a small, albeit important part of a complicated calculation to determine public support for war. When models of public support include this visual information, scholars glean a more complete understanding of public opinion formation.

CHAPTER IV

EFFECTS OF TELEVISED IMAGES OF VIOLENCE ON PUBLIC SUPPORT FOR WAR

How does the public react when television news images put them on the frontlines of battle? News coverage is a powerful factor in influencing public opinion, but past empirical works largely neglect the visual component of television news. Most media studies of public opinion about war have focused on spoken or written content, identifying correlations between battlefield events and amount of public support as evidence of the effect of news without directly examining news imagery²². However, without a consideration of visuals, we capture only part of this causal story. Emotion-laden imagery may evoke powerful reactions that are independent of a news story's verbal information (Sears 1993; Brader 2006). If war imagery is now a fundamental component of information received by citizens, models of public support must be revised in a way that consider that impact of visual information on public opinion.

Through a large-scale content analysis of network news programs, preceding chapters of this dissertation provided evidence that television news coverage of war has changed dramatically since the Vietnam era. Modern televised images of violence dwarf their predecessors, both in frequency and severity. In this chapter, I explain the effects of this ubiquitous violence, investigating the relationship between public support for war and television news images of the battlefield. Integrating research on violence and framing with information-based theories of political choice, I show that war images do

²² Exceptions exist, see Baum 2003; Fan 1993; Iyengar and Simon 1994; Prior 2005.

indeed shape public opinion. Though violence wears a normative label of negativity in contemporary society, it is not that violent images uniformly suppress support for war. Instead, consistent with the “justified violence” theory I put forth in this chapter, the effects of violent images are conditioned by reasons for war violence, as framed by news reporters. To a large degree, the way viewers interpret an act of violence is dependent on the perpetrator’s perceived motive for engaging in such behavior.

I present evidence from a five-year span of the Iraq war to come to this conclusion. Combining data from my content analysis of network news with aggregate public opinion data, I demonstrate a strong relationship between images of war violence and public support for the Iraq war. As network news programs broadcast more severe images of justified violence, public support for Iraq increases. Likewise, as networks increase images of unjustified violence, public support for the war wanes. In the end, this analysis of visual information has broad implications for our understanding of public opinion.

News coverage and determinants of public support for war

Ever since John Mueller first demonstrated that aggregate support for war was negatively related to the log of casualty rates, the view of public support for war as a sort of rational calculation has permeated political science (Gartner and Segura 1998, 2000; Gelpi, Feaver and Reifler 2005; Jentleson 1992; Jentleson and Britton 1998; Larson 1996, 2005; Mueller 1973, 1994). However, the connection between casualties and support is not absolute. Take the following example. Public support for both the Vietnam War and the war in Iraq started at relatively high levels only to fall dramatically over following

years. One of Gallup's key indicators of war support for both the Vietnam War and the present war in Iraq asks Americans whether it was a "mistake" to send troops to these countries. The data for both wars are presented in figure 16. In order to present comparable results, the data have been aggregated into quarterly averages, based on the first quarter of the year each war began, August 1965 for Vietnam and March 2003 for Iraq.

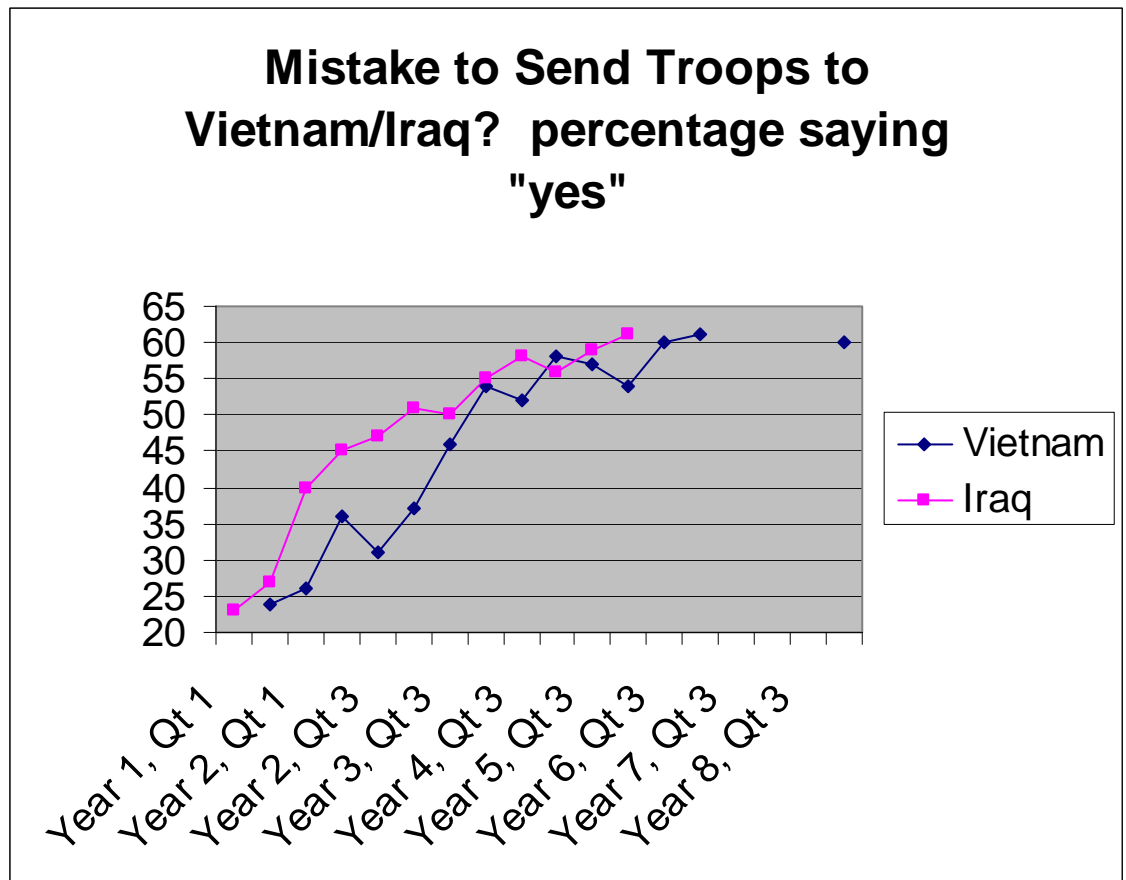


Figure 16: Percentage of citizens agreeing it was a mistake to send troops to war: Vietnam versus Iraq

Public support for Iraq clearly declined much more quickly than support for Vietnam. However, if battlefield deaths are the primary cause of opinion change, we

would expect support for the Vietnam War to diminish many times more quickly than Iraq, as thousands more American lives were lost compared to Iraq. Since our expectation was not met, some other force is working to systematically influence public opinion.

Indeed, recent scholarship has shown that individuals evaluate a set of related factors when deciding whether to support a war effort, including monetary costs, benefits of victory, perceptions of winning and losing, and amounts of elite consensus in addition to battlefield deaths (among others, Burk 1999; Eichenberg 2005; Feaver and Gelpi 2004; Gelpi, Feaver, and Reifler 2005; Herrmann, Tetlock, and Visser 1999; Johnson and Tierney 2006; Kull and Ramsay 2001; Russett and Nincic 1976; Zaller 1992, 1993). Additional studies also moved beyond Mueller's basic theory and offered greater specifications²³. Still, his work remains a prevailing explanation of public support for war among policymakers and academics alike (Burk 1999; Klarevas 2002).

Taken together, this body of literature asserts that it is the events in a particular conflict that directly influence public support for war. The basic logic for Mueller's argument and those that followed him is the same: as rational actors, the mass public will support conflict if, and only if, the events of war cause the perceived benefits of victory to outweigh the human and monetary costs of military involvement (Berinsky 2007). Nevertheless, most citizens have no direct exposure to a war on foreign soil. The vast majority of war events thought to influence the mass public is conveyed to them *through* news media. While news coverage can be a powerful force on public opinion in any subject area, it is especially influential in shaping beliefs about war.

²³ For example, Gartner and Segura (1998, 2000) emphasized the importance of local casualty rates in shaping public opinion about war.

Nevertheless, empirical works have largely neglected the content of the news coverage itself. Most studies of news have analyzed written or spoken content alone, finding effects of news on public opinion vis-à-vis correlations between war events and levels of public support for the conflict. These studies are important, giving us a foundation upon which to build an understanding of citizen support for war. However, they also result in a literature revolving around aggregate-level analysis of war support at the expense of substantive examinations of individual-level theories of attitude formation (Althaus and Coe 2008; 2011). In order to advance this valuable strain of research, scholars must demonstrate more convincing relationships between aggregate-level data and the connected progression of attitude change among individuals. I propose that violent war images lead to attitude change through the associated mechanism of emotional and physiological arousal. As today's television news programs provide more visual information than ever before, and because television is the main venue through which most citizens learn about political dialogue (Mutz 2007), it is of particular relevance to evaluate the influence of images.

Hypotheses

As I develop hypotheses to ground this study, I look to the relationship between attitude change and violence. Television news images of war consistently revolve around themes of violence. It is a powerful emotional force, acting as a magnifying glass for existing feelings and innate reactions. Violence is thought to affect individuals via the emotional mechanisms of anger, fear, sadness, disgust, hostility or contempt (Bushman

and Geen 1990). From a psychological perspective, individuals typically react negatively to violence, particularly when high levels of violence exist (Huesmann and Taylor 2006).

In contemporary society, violence tends to wear a normative label of negativity. We punish our children if they exhibit violent behavior. We restrict entrance to violent films. We pay for programs to limit violence on city streets. We criminalize violent acts of all kinds against fellow human beings. We even criminalize violence against animals. Simply, violence in everyday society is unacceptable. If violence is indeed unacceptable, and if war violence on today's television news is omnipresent, a most basic hypothesis follows:

HI: Increased levels of violent war imagery in television news will decrease public support for war.

However, there is reason to believe that political violence may affect individuals differently from other forms of violence. Unlike most methods of violence which society deems as unacceptable, political violence may be justified. Some scholars argue that acts of political violence can never be justified in a democracy because they conflict with a democracy's obligation to obey the law (Wolff 1969). Persons in a democracy exist under the presence of either an innate duty or a societal obligation to adhere to the law and to consequently avoid violence (Rawls 1971). Nevertheless, another group of scholars (Honderich 1976) asserts the justification of some political violence does exist. While some acts of political violence may undoubtedly result in a system of government much less democratic than if the violence had not occurred, this does not necessitate that all acts of violence are unjustified. As philosopher Ted Honderich stated, "The ends which are thought to be served by the rules of democracy are at least sometimes served

by the breaking of the rules (1976, p. 108).” As long as the acts of violence advance a society toward freedom and equality, they may be considered justified.

Furthermore, our understanding of an act of violence depends to a large extent on an individual’s motives for engaging in such behavior (Wilson et al 1997). Individual soldiers, like all human beings, also have the right to protect themselves and those close to them from harm. If the violence they inflict on others is motivated by protection or retaliation to another’s aggression, it may be considered justified violence as well. This distinction is especially clear in cases of war, but holds in domestic environments as well. For example, suppose a father shoots someone who is attempting to kidnap his son. Particular motives such as self-defense and defense of family and friends seem justified to viewers, and they may be relieved to see the father kill the kidnapper. In the same way, soldiers are justified in protecting themselves and their fellow soldiers. Hence, I define justified violence as injurious physical force or action committed with the intent of furthering the cause of freedom and equality or the intent of protection or retaliation.

In the case of justified violence, an act of violence does not serve as repellant to public support for war. On the contrary, it acts as a stimulus of emotional arousal, drawing one’s attention to the story at hand (Mutz 2007). If images of violence are portrayed as justified, or desirable, the emotional arousal caused by viewing violence will magnify that justification, bringing about positive feelings of support toward the conflict in excess of those that would have existed without the violent images. Conversely, the lack of justification of violent images will intensify an individual’s affect of dislike. A set of alternative hypotheses result:

H2A: Violence framed as a justified means will increase public support for war.

H2B: Violence framed as an unjustified means will decrease public support for war.

When evaluating the frame of violence, I refer to Entman's (1993) definition, "to select 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." Television news networks may frame violent images by the words they say, by the use of other contextual images, or by a combination of the two.

The third set of hypotheses assumes that the evaluative tone employed by television news reporters shapes viewer perceptions of news they receive. The tone of the reporter may also influence the impact of imagery.²⁴ Frame and evaluative tone often move together (data are correlated at 0.42), such that frames of unjustified violence coincide with negative evaluative tones, or frames of justified violence work in tandem with positively toned reports. Nevertheless, they are distinct story elements. If evaluative tone is positive or negative, it may have a measurable effect on public opinion.

H3A: Positive-toned stories will increase support for war

H3B: Negative-toned stories will decrease support for war.

The final hypotheses of this study focus on perpetrators and targets of war violence. The identities of individuals who inflict violence on others, as well as the identities of those

²⁴ I measure tone as positive, negative or neutral in relation to the stated position of the President. There are advantages and disadvantages to measuring tone in this way. An important benefit of this measure is that it increases the ability to measure television news approval of the President. This will be particularly useful as I evaluate how television news influences public support for the President and his wars. On the other hand, it is possible for a story to be positive or negative, and yet coded as neutral provided the normative tone is directed at someone or something else other than the President and his administration. This measure does not code for those nuances in tone.

who receive violence, are also likely to affect public support for war. This is partially due to the public's raw feelings toward certain demographics, and partially because some demographics lend themselves more easily to a justified or unjustified frame. While I will be unable to disentangle completely the reasons, I can test if the presence of various demographics increases or decreases aggregate support for war.

Civilians are all too often the collateral damage of war. The public generally does not approve of violence against civilians. These negative feelings are exacerbated when women and children are the targets. Hypothesis 4 follows.

H4: The portrayal of civilians as targets of violence is negatively related to the level of support for military action.

American perpetrators of violence are more likely to receive our support than foreign perpetrators of violence. While American perpetrators can be portrayed by the media (and often are) to participate in unjustified violence, they are present overseas, at least ostensibly, for a justifiable reason. News producers have a relatively difficult time painting foreign perpetrators as engaged in justified violence. Hypotheses 5 and 6 follow.

H5: The portrayal of Americans as the perpetrators of violence is positively related to the level of support for military action.

H6: The portrayal of foreigners as the perpetrators of violence is negatively related to the level of support for military action.

Methods and data

Public support for Iraq began at relatively high levels (75% approval in March 2003) and gradually declined to less than 36% approval in 2007. While opinion certainly trends downward over time, the public's support for war ebbs and flows in response to

events surrounding the conflict (see figure 17). These fluctuations are useful in discovering determinants of war support.

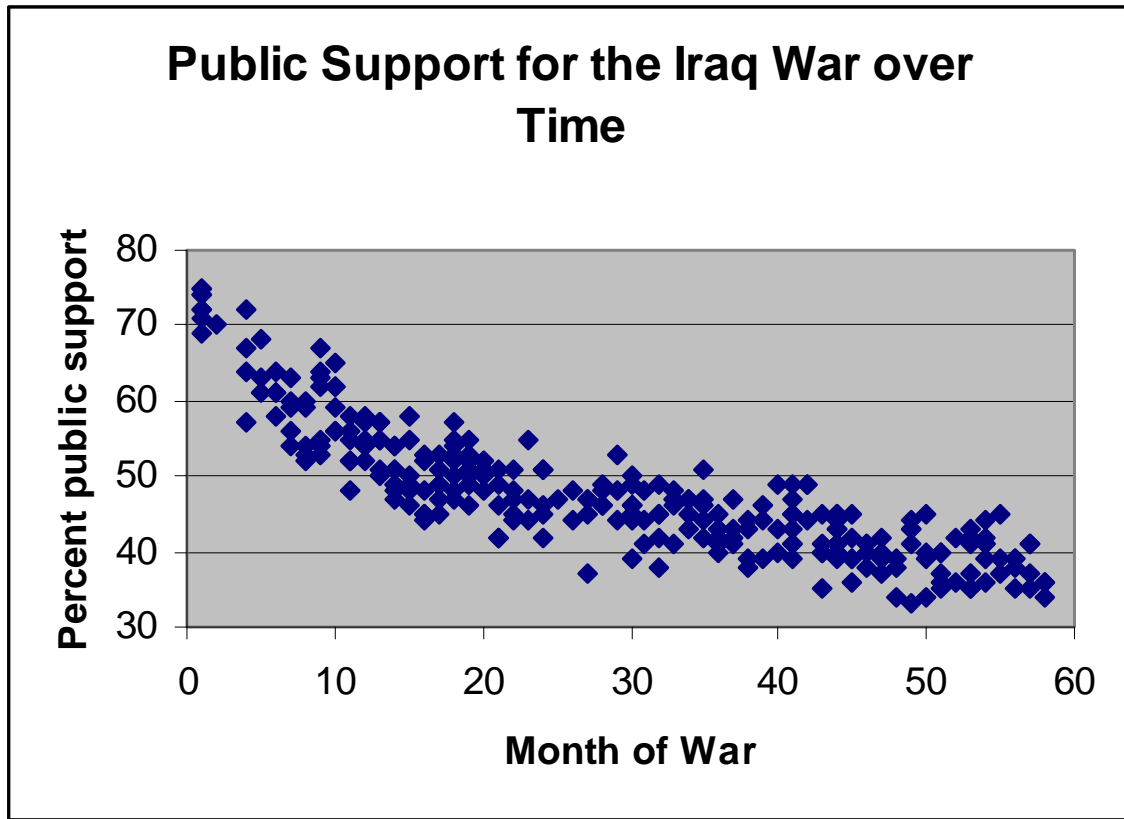


Figure 17: Public support for the Iraq War over time
Each data point represents the level of public support determined by a given public opinion poll.

Countless survey questions have been used to measure the public’s reactions to America’s wars, gauging opinions on a myriad of categories of war events. The abundance of existing detail can complicate understanding of broad trends of support. To combat this problem, I analyze only one category of opinion polls: those that ask respondents whether or not it was appropriate for the United States to take military action against Iraq in the first place. The literature has shown that these “worth fighting,” “mistake,” “right thing” and “right decision” questions accurately gauge prevailing

opinions about war (Althaus and Coe 2008; Mueller 1973). Using the Roper Center for Public Opinion Research's iPoll database, I identify survey questions about the Iraq war that were asked at least 20 times during the period of study and that used "worth fighting," "mistake," "right thing," or "right decision" question wording (n = 287). These data points include six question trends across the first five years of the Iraq war, from the onset of combat in March 2003 through January 2008. These trends are described in table 8.

Each opinion poll is assigned a data point determined by the percentage of poll respondents who answered in support of the war. Though the six question trends have slightly different question wording, they move together, suggesting that the wording of any one trend does not cause respondents to systemically indicate increased or decreased support compared to other question wordings. Figure 18 shows all question trends together. To control for potential variation in response across question wording, I employ robust clustered standard errors in the regression model, clustering by question trend.

Though these longitudinal public opinion data are useful in separating out causes for change in war support over time, it is important to note their limitations. Aggregate-level polls are imperfect for this study because they do not differentiate between television news consumers and those that do not watch television news. As I argue that images in television news are the impetus for change in opinion²⁵, this may be a serious shortcoming. If we know that a large portion of the citizenry does not consume television news at all, how can we trust these data?

²⁵ The independent variables of most interest come from my content analysis of network television news of Iraq, 2003-2007.

Table 8 Support Trends Available for the Iraq War²⁶

Organization and Question	Wording	N of Cases	First Poll	Last Poll
ABC/POST “Worth Fighting”	“All in all, considering the costs to the United States versus the benefits to the United States, do you think the war with Iraq was worth fighting, or not?”	534	/29/2003	1/11/2008
CBS/NYT “Right Thing”	“Looking back, do you think the United States did the right thing in taking military action against Iraq, or should the US have stayed out?” ²⁷	651	2/12/2003	1/11/2008
Gallup “Mistake”	“In view of the developments since we first sent our troops to Iraq, do you think the United States made a mistake in sending troops to Iraq, or not?”	683	/25/2003	12/1/2007
PSRA “Right Thing”	“From what you know now, do you think the United States did the right thing in taking military action against Iraq last March (2003), or not?” ²⁸	583	/21/2003	12/26/2007
PSRA “Right Decision”	“Do you think the United States made the right decision or the wrong decision in using military force against Iraq?”	237	/25/2003	8/2/2007
Quinnipiac “Right Thing”	“Do you think going to war with Iraq was the right thing for the United States to do or the wrong thing?”	209	/13/2003	10/26/2007

Total cases = 287

²⁶ Includes only support trends with number of cases greater than or equal to twenty.

²⁷ The initial question in this poll was rephrased slightly: “Do you think the United States did the right thing in starting military actions against Iraq now, or should the United States have waited and given the United Nations weapons inspectors more time?”

²⁸ Beginning in March 2004, this question was given a slightly different phrasing: “From what you know now, do you think the United States did the right thing in taking military action against Iraq [last year/two years ago], or not?”

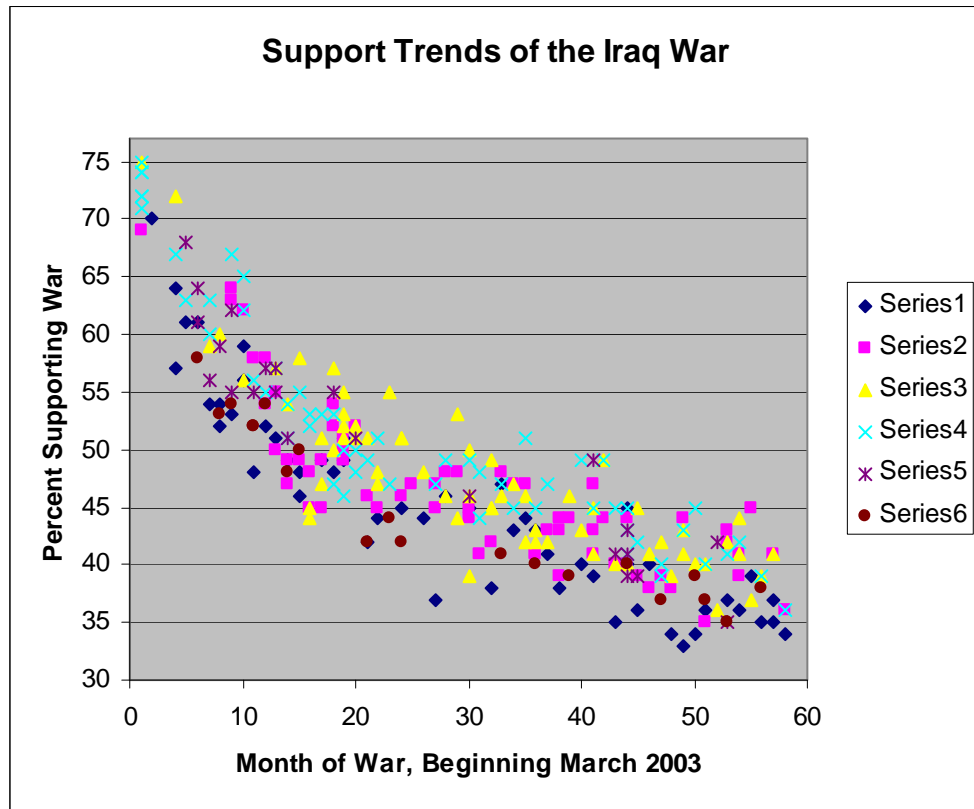


Figure 18: Support trends of the Iraq War by question wording

While it is true that many respondents in the polls undoubtedly do not watch television news on a regular basis, the use of lead stories may help alleviate some of the problem. Lead stories, because of their saliency, are more likely to reach the public in some other form (internet, newspapers, interpersonal conversations, etc.), making the relationship more likely to exist. Research has shown a great degree of similarity in the reporting of various media outlets (Benton and Frazier 1976; Grabe et al 2009).

Newspapers, mainstream internet news providers and television news all tend to report on the same events each day. If the public consumes a different type of media, they may

still see images similar to those on television news programs, as the same images present in television news replicate in multiple media forms. Hence, though limited, these data may serve well as a proxy for the public support of television news consumers.

To create a data set sufficient for detecting the effects of war imagery on public support for war, I convert the unit of analysis of my original data set, discussed in chapter 2, from news story to public opinion poll. Figure 19 shows the distribution of polls by month. Public support is the dependent variable. As current public opinion is influenced by news stories from the recent past, independent variables from my content analysis are assigned a value for each poll equal to the average of that variable for all sampled news stories²⁹ over the month prior to the opinion poll. The most important of these is the severity of violent images and the frame of the violence as justified or unjustified. To access my secondary hypotheses, I include variables for tone, American perpetrators of violence, enemy perpetrators of violence and civilian targets.

My analysis includes separate controls for the passage of time, casualties and the occurrence of major events. I expect support for Iraq to decline over time. This month of war variable also allows for the possibility that variation in war support may be higher in the earlier months of the conflict, when attitudes about the war are less crystallized and thereby more easily swayed (Althaus and Coe 2009). Consistent with the casualty literature discussed earlier, increased numbers of casualties should suppress support for war. Though the log of cumulative casualties has often been used in statistical models to

²⁹ Using a random number generator, I drew a sample of 437 days (one-fourth of the total numbers of days in the population of study, March 20, 2003-December 31, 2007) from the Iraq war. For each day in the sample, I analyzed the broadcast's two lead stories. The sample was randomly divided between the networks of ABC, CBS and NBC. Research in Chapter 2 showed ABC, CBS, and NBC broadcast similar content and images of violence.

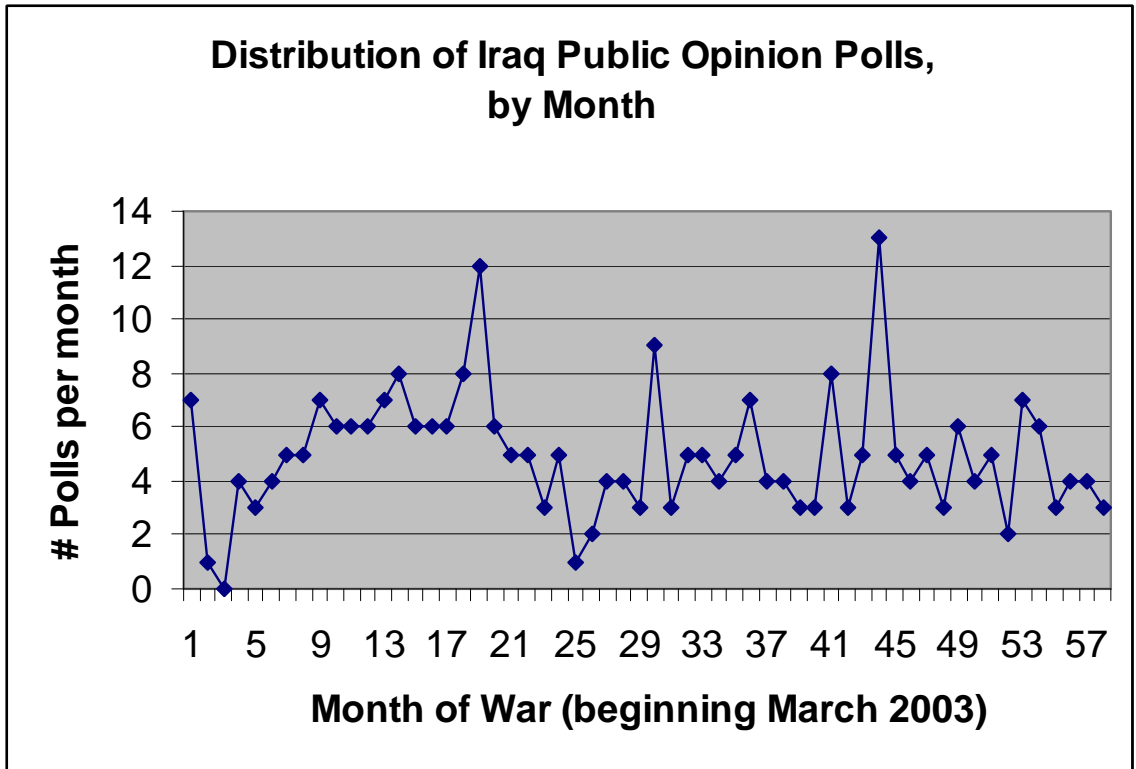


Figure 19: Distribution of Iraq public opinion polls, by month

study this effect, it is strongly correlated with the passage of time. To get around the overlap between log of casualty rates and time, I measure the raw number of American casualties in the month prior to each opinion poll³⁰. This measure is consistent with the monthly averages of independent variables in television news.

Additionally, the study controls for sudden changes in support caused by the occurrence of major events. These “rally events,” as they are known in the literature on public support for war, may cause either drops or increases in levels of support. The common bond of rally events is their salience in the minds of the public. To determine major war events of the Iraq war, I conducted an additional content analysis of the

³⁰ This approach modifies methods use by Gartner and Segura (1998), Gartner, Segura and Wilkening (1997), and Gartner (2008), who used data of the marginal number of Americans killed between support measures.

Vanderbilt Television News Archives. I identified those events that made the news, on average, at least once a night (on the evening news programs of any of the major networks, ABC, CBS, CNN, or NBC) during the month following their occurrence. Consequently, when modeling support for war, I include dummy variables for each of the eight events that fit my criteria. A list of the events and news counts are included in Table 9. The events themselves are not of particular interest to this study; instead, I rely on these dummy variables to control for unusual, event-related cases of support change that might otherwise wield disproportionate influence on the regression model.

Table 9: Major Events in the Iraq War, 2003-2007³¹

<u>Date:</u>	<u>Event:</u>	<u>Number of news stories</u>
July 20, 2003	US kills Hussein's sons	35
December 13, 2003	US captures Hussein	67
January 25, 2004	Kay report says the US misjudged Iraqi WMDs	64
April 28, 2004	Abuses at Abu Ghraib revealed	183
May 11, 2004	American Nick Berg decapitated	35
Jan. 30, 2005	Iraq's first free elections	64
December 15, 2005	First parliamentary elections	40
June 7, 2006	Terrorist leader al-Zarqawi killed	76

³¹ Major events determined by content analysis of the Vanderbilt Television News Archives, including those events that made the news, on average, at least once a night (on the evening news programs of any of the major networks, ABC, CBS, CNN, or NBC) during the month following their occurrence.

Description of data

The data set shows a considerable amount of variation in television news broadcasting of war events and violent imagery over time. The severity of violent images fluctuates greatly depending on the period of war examined. Some months, such as mid-May to mid-June of 2004, contain almost no violent imagery. During this period of time, the House of Representative's decision to approve \$447 billion in military spending dominated television news rather than activities on the battlefield. American casualties over this time period were significantly below the monthly mean as well, potentially contributing to network decisions to broadcast much lower levels of violence. On the other hand, some months average extreme displays of war violence. For example, attacks by coalition and Iraq forces on rebel armies in Fallujah in November 2004 led to hundreds of deaths. Television news programs showed viewers particularly graphic coverage of civilians killed during those attacks (averaging up to 11 out of a 13-point scale of violence). Early March to early April of 2006 is representative of average displays of violent imagery on network news (5.5 out of a 13-point scale). Noteworthy events of this time included calls for Defense Secretary Donald Rumsfeld's resignation and the tripling of homicide rates in Baghdad.

Additionally, these data offer evidence that network news programs change the way they frame war violence over the course of the war. At one extreme, such as Iraq news stories during the month following the capture of Saddam Hussein in mid-December 2003, networks framed violence as completely justified. At the other extreme, networks sometimes painted violence as completely unjustified for relatively long periods. Such was the case for most of a three-month stint from August-October, 2005.

During this time, news programs highlighted the rising civilian death toll, including a chaos-induced stampede that killed 1,000 Iraqis in a single day. Over an average 30-day period during the Iraq war, networks frame war violence as relatively unjustified, or -0.51 on a scale where -1 is unjustified, 0 is neutral and 1 is justified. Early January – early February of 2007 is representative of this predominantly unjustified frame. News programs focused on George W. Bush’s plan to send 20,000 additional troops to Iraq and the United Nation’s report that 34,000 Iraqis died from war violence in previous year. Summary statistics of all variables are noted in table 10.

Findings

I examine the effects of violent images on television news on public support while controlling for time, casualties, intensity of war news and major events. I predict that violent imagery will either decrease or increase public support for war, depending on how the images are framed. High levels of violence will draw viewer attention to news stories and amplify the framing effects used by news reporters.

As a preliminary investigation of the relationship between public opinion and television news images, key variables from the content analysis of network television news programs and control variables were subjected to bivariate correlations with measures of public support from the polling data. Positive correlations suggest the variable is likely to increase public support for war, while negative correlations indicate a probable decrease in support. These correlations offer insight into (a) the comparative utility of categories as I have conceived them, and (b) the statistical relationships between components of television news and public opinion. Table 11 presents these results.

Table 10 Summary Statistics, opinion poll as unit of analysis

Dependent Variable

	Scale	Mean	St. Dev	Minimum	Median	Maximum
Public Support	0 – 100	47.79	8.59	33	46	75

Key Independent Variables

	Scale	Mean	St. Dev	Minimum	Median	Maximum
Severity of Violence	0 (none) -13 (extreme)	5.55	2.10	0	5.25	11
Frame of Violence	-1 (unjustified) – 1 (justified)	-0.51	0.53	-1	-0.67	1
Violence x Frame	-13 (high, unjust) - 13(high, just)	-2.89	3.06	-11	-3.3	6.5
Tone	-1 (negative) - 1 (positive)	-0.17	0.40	-1	-0.13	1
American Perp	0 (not American) – 1 (American)	0.21	0.27	0	0	1
Enemy Perp	0 (not enemy) – 1 (enemy)	0.61	0.33	0	0.67	1
Civilian Target	0 (not civilian) – 1 (civilian)	0.57	0.33	0	0.60	1

Control Variables

	Scale	Mean	St. Dev	Minimum	Median	Maximum
Intensity of war news	0 (neither lead story) – 2 (both leads)	0.70	0.42	0	0.60	2
Deaths in month prior to poll		71.89	27.07	6	71	142
Month of War		28.85	16.20	1	29	58
Stories per poll		8.64	2.72	1	9	19
Events:						
Hussein's Sons Killed		0.01	0.10	0	0	1
Hussein Captured		0.03	0.16	0	0	1
Kay Report		0.02	0.13	0	0	1
Abu Ghraib Abuses		0.03	0.17	0	0	1
Nick Berg Decapitated		0.02	0.15	0	0	1
Iraq's first free elections		0.01	0.11	0	0	1
First parliamentary elections		0.02	0.14	0	0	1
Al-Zarqawi Killed		0.01	0.12	0	0	1

Analysis of the data shows no statistical association between public support and severity of violent images, the variable of primary interest. However, this null finding is consistent with the second set of hypotheses. Violent images alone may not systematically increase or decrease support for war. Instead, violence may affect viewers positively or negatively, depending on the frame employed by reporters.

Small but statistically meaningful correlations do emerge among several elements of television news programs. Reporters' framing of violence as justified, the presence of severely violent images conditioned by justified frames, positive evaluative tone, images of American perpetrators of violence and high news intensity are all associated with increases in public support for war. As expected, images of foreign perpetrators of violence, images of civilian targets, and higher deaths in the month prior to opinion polls are likely to decrease levels of support. The control variable for month of the conflict exhibits the strongest correlation, suggesting that support for war is likely to decrease over time. Finally, examining control variables for major events, the killing of Saddam Hussein's son and his capture were likely to inflate opinions about Iraq.

I next use linear regression to investigate the influence of violent images in television news. First, to test hypothesis 1, I evaluate the influence of violent images alone. The first model I examine is

$$\begin{aligned} \text{APPROVAL} = & p_0 + p_1\text{VIOLENCE} + p_2\text{TONE} + p_3\text{AMERICANPERP} + \\ & p_4\text{ENEMYPERP} + p_5\text{CIVTARGET} + p_6\text{INTENSITY} + p_7\text{DEATHS} + p_8\text{MONTH} \\ & + p_9\text{STORIESPERPOLL} + p_{10}\text{HUSSEINSONS} + p_{11}\text{HUSSEIN} + p_{12}\text{KAY} + \\ & p_{13}\text{ABUGHRAIB} + p_{14}\text{BERG} + p_{15}\text{FIRSTELECT} + p_{16}\text{PARELECT} + \\ & p_{17}\text{ALZARQAWI} + e. \end{aligned}$$

Table 11: Correlations between Polling Data and Variables from content analysis

<u>Variable</u>	<u>Correlation</u>
Key Variables	
Severity of Violent Images	-0.117
Frame of Violence (Justified)	0.368
Violence x Frame (Justified)	0.405
Tone (positive)	0.330
Images of American Perpetrators	0.333
Images of Foreign Perpetrators	-0.307
Images of Civilian Targets	-0.166
Control Variables	
Intensity	0.173
Deaths in month prior to poll	-0.291
Month of War	-0.852
Stories per poll	-0.010
Hussein's Sons Killed	0.194
Hussein Captured	0.273
Kay Report	0.093
Abu Ghraib Abuses	0.044
Nick Berg Decapitated	0.067
Iraq's first free elections	0.027
First parliamentary elections	-0.033
Al-Zarqawi Killed	-0.063

Correlations in bold print are statistically significant at the $p < 0.05$ level.

APPROVAL represents the percentage of Americans signifying that they support the war (wording varies slightly by question, as discussed earlier). Opinion poll is the unit of analysis. VIOLENCE represents the average severity of violent images broadcasted in the month prior to the opinion poll. TONE is the average evaluative tone taken by reporters (in relation to the stated position of the President and his administration) in the month prior to the poll. AMERICANPERP represents the percentage of stories in the month prior to the poll in which Americans were portrayed as the primary perpetrators of violence. Likewise, ENEMYPERP is the percentage of stories in the month prior to the poll in which enemy forces were portrayed as the primary perpetrators of violence, and CIVTARGET is the percentage of stories in the month prior to the poll in which civilians are portrayed as targets of violence. INTENSITY represents the average number of lead stories about the Iraq war in the month preceding the poll. DEATHS is the number of American casualties in the month prior to the poll. MONTH represents the numerical month of the conflict, counting from the beginning of hostilities on March 20, 2003. STORIESPERPOLL is the number of sampled news stories per poll. Variables 10 through 17 represent the major war events of the killing of Saddam Hussein's sons, Saddam Hussein's capture, the release of the Kay report, the revelation of abuses at Abu Ghraib, Nick Berg's decapitation, Iraq's first free elections, Iraq's first parliamentary elections, and the killing of al-Zarqawi, respectively.

Using severity of violent images as the independent variables of primary interest, this model fails to confirm hypothesis 1, that increased levels of violent war imagery will decrease public support for war. The first column in table 12 reports these results.

The second model I examine is

$$\text{APPROVAL} = p_0 + p_1\text{VIOLENCE} + p_2\text{FRAME} + p_3\text{VIOLENCEF} + p_4\text{TONE} + p_5\text{AMERICANPERP} + p_6\text{ENEMYPERP} + p_7\text{CIVTARGET} + p_8\text{NTENSITY} + p_9\text{DEATHS} + p_{10}\text{MONTH} + p_{11}\text{STORIESPERPOLL} + p_{12}\text{HUSSEINSONS} + p_{13}\text{HUSSEIN} + p_{14}\text{KAY} + p_{15}\text{ABUGHRAIB} + p_{16}\text{BERG} + p_{17}\text{FIRSTELECT} + p_{18}\text{PARELECT} + p_{19}\text{ALZARQAWI} + e.$$

This model is identical to the first with two notable exceptions. I include FRAME, which represents the average frame of violence (justified versus unjustified) employed by reporters in the month prior to the poll. VIOLENCEF is an interaction variable that multiplies the average effects of severity of violent images and frame. With the addition of the interaction variable, violent images x frame, results confirm hypotheses 2A and 2B: Violence framed as a justified means of action will increase public support for war, and violence framed as an unjustified means will decrease public support for war. Results from Model 2 are presented in the second column of table 12.

The results for the influence of violent images, conditioned by frame of violence, are substantively meaningful. This model suggests violent images can exert significant influence on public opinion. The higher the level of violence viewed by television news consumers, the greater this capacity for opinion change. For example, earlier I discussed that news networks broadcasted especially violent images in November of 2004 in connection with bloody attacks on the Iraq city of Fallujah. These levels of violence, when combined with consistent framing of either justified or unjustified violence, can move aggregate public support upwards of six points on a 100-point scale. Even average

Table 12: Predicting Support for U.S. Involvement in Iraq

Variable	Model 1	Model 2
Key Variables		
Severity of Violent Images	-0.195 (0.178)	0.117 (0.251)
Frame of Violence (Justified)	n/a	-2.495 (1.212)
Violence x Frame (Justified)	n/a	0.552 (0.186)*
Tone (positive)	3.258 (0.895)*	3.009 (0.799)*
Images of American Perpetrators	3.639 (0.818)*	3.872 (1.137)*
Images of Foreign Perpetrators	-2.281 (1.210)	-1.576 (1.107)
Images of Civilian Targets	-0.124 (0.464)	-0.341 (0.633)
Control Variables		
Intensity 0.980	 (1.227)	1.014 (1.232)
Deaths in month prior to poll	-0.005 (0.012)	-0.012 (0.013)
Month of War	-0.412 (0.022)*	-0.402 (0.020)*
Stories per poll	0.018 (0.012)	0.038 (0.053)
Hussein's Sons Killed	9.239 (2.439)*	9.278 (2.490)*
Hussein Captured	1.130 (1.057)	2.427 (1.137)
Kay Report	-1.151 (1.603)	-0.999 (1.429)
Abu Ghraib Abuses	-4.591 (1.096)*	-4.420 (0.940)*
Nick Berg Decapitated	0.644 (0.738)	0.903 (0.771)
Iraq's first free elections	-1.394 (2.092)	-1.044 (2.014)
First parliamentary elections	-0.923 (1.073)	-0.611 (1.111)
Al-Zarqawi Killed	-0.686 (1.127)	-0.422 (1.249)
Constant	61.648 (1.882)*	59.739 (2.348)*
R-squared	0.80 0.81	
N	275 275	

OLS Regression coefficients with robust clustered standard errors (by opinion poll question trend). Bold coefficients with asterisks are statistically significant at the $p < 0.05$ level.

levels of television violence are capable of changing aggregate opinions by approximately three points on a 100-point scale.

The models also offer interesting results for the secondary hypotheses of this study. Both models lend support to hypotheses 3A and 3B, that stories with a positive evaluative tone will increase support for war, just as negative-toned stories will decrease support for war. This study suggests the substantive impact of tone can affect aggregate public opinion by approximately three points on a 100-point scale. The data confirm hypothesis 5 as well, showing that the portrayal of Americans as the perpetrators of violence is positively related to the level of support for military action. These results are also substantively rigorous, able to move aggregate opinion almost four points on a 100-point scale. The data do not confirm hypotheses 4 and 6, though the signs of the coefficients are in the expected directions. Further works must be done before we can make definitive claims about the bearing of images of enemy perpetrators of violence and civilian targets on television news.

Discussion

Taken together, this study confirms that television news networks have the necessary tools to shape public opinion in meaningful ways. Using the findings of this study alone, aggregate opinion may move up to 13 points as the direct result of television news images and the way news reporters talk about them. Violent images can serve as powerful manipulators of public support in either direction, but a frame must be applied to the violence in order for it to systematically affect support for war. By grabbing

viewer attention, violent imagery increases the power of story frames and provides greater opportunity for television's already pervasive influence.

There are a few limitations to drawing inferences from these data that should be recognized. While some relationship clearly exists between the framing of war violence and public support for war, we cannot tell from these data which way the causal arrow points. Do television news programs shape public opinion with framing of war violence, or are television news programs simply framing violence in a way that matches public opinion of the time? Nevertheless, this work highlights the need for future research to clearly disentangle causal connections between war images, framing and public opinion. In the next chapter, I use a randomized experiment to pinpoint individual-level sources of public opinion change in reaction to images of war violence. This experiment will also gauge the causal mechanisms at work in bringing about changes in public support.

In conclusion, reactions to violent war imagery are just a small, albeit important part of a complicated calculation to determine public support for war. Individual political predispositions most certainly interplay with the valence of network news coverage, making media messages conditional and varying in their effects on support for war. In this study I highlight the importance of images of television news violence and their surrounding frames in determining support for war. My data lay the foundation for future works to further explore how changes in news presentation and graphic imagery affect public support for war.

CHAPTER V

TELEVISION NEWS AND PUBLIC SUPPORT FOR WAR: AN EXPERIMENTAL INVESTIGATION OF THE EFFECTS OF IMAGES

The omnipresence of violent images in television news stories of war begs the question: how do individuals react to graphic imagery of war violence? The preceding chapter of this dissertation provided evidence that violent images influence the opinions of the citizenry at the aggregate level. Here I expand that research to the individual level, investigating the interplay between violence and an individual's decision making calculus about support for war. Because citizens react to violence both cognitively and physiologically (Gleitman, Reisberg and Gross 2007), violent images may interact uniquely with existing attitudes and political predispositions to shape opinions about military conflict.

Scholarship has shown that individuals consider a wide array of factors when deciding whether to support war. Building from John Mueller's (1973) discovery of the negative relationship between support for war and casualty rates, models of public support for war have expanded to include a large number of considerations. Over time, the analysis of these factors has increased the level of detail in our understanding of the formation of public opinion. By expanding these models to include measures for exposure to violent imagery, my work will further nuance the conceptualization of public support for war. As such, my intention is to improve on existing public opinion models rather than to discard or change them in fundamental ways.

This chapter provides new evidence that violent images do indeed mold individuals' opinions about war. By designing a randomized, controlled experiment, I examine the effect of graphic violence and framing on public support for war. The results suggest that viewing violent war imagery significantly lowers opinion about war. Likewise, the frame of the story systematically influences one's level of support. Violence framed as an unjustifiable course of action consistently lowers support for conflict. However, violent images framed as justified by the perpetrator's desire for some democratic good increase support.

Determinants of public support for war among individuals

Individuals make complex choices when deciding whether to support war, evaluating a number of related variables. Considerations include perceptions of winning and losing, casualty tolerance, benefits of victory, monetary costs, initial support for war, levels of elite consensus, number of war deaths from one's own district, context of casualties and others (among others, Burk 1999; Eichenberg 2005; Feaver and Gelpi 2004; Gartner 2008; Gelpi, Feaver, and Reifler 2005; Herrmann, Tetlock, and Visser 1999; Johnson and Tierney 2006; Kull and Ramsay 2001; Oppenheimer and Gross 2007; Russett and Nincic 1976; Zaller 1992, 1993). While clear relationships among many of these variables and level of public support emerge at the aggregate level, making definitive connections using cross-sectional, individual-level data is much more difficult. The establishment of causation becomes murky when many variables are highly interconnected (Berinsky and Druckman 2007).

For example, Mueller continues to espouse the belief that overall support for war is a function of casualties (1973; 2006). Feaver, Gelpi and Reifler, on the other hand, argue that tolerance of war casualties is dependent on the perceived level of success of the war and one's initial level of support for it (2006). An obvious endogeneity problem surfaces, with arguments about the causal direction of related variables emerging on both sides (Berinsky and Druckman 2007). Clearly, more work is required to tease apart which factors direct the public's feelings about war.

In regard to media's effect on public opinion, research shows that elite rhetoric, framing and priming consistently impact individuals' views of foreign policy issues (Baum and Groeling 2005; Berinsky 2007). However, the exact dynamics of these forces may depend largely on the media messages themselves. Messages from competing elites may undermine each other, while ubiquitous or particularly vivid messages can have a relatively large impact. Furthermore, all media messages must be filtered through individual-level variables like knowledge, partisanship, and values, making media messages conditional in their effects (Druckman 2001; Druckman and Holmes 2004; Iyengar 1991).

Though the impact of violent images of war on public opinion is a component of media effects that remains unclear, there is reason to believe that exposure to violent imagery will affect individuals' levels of public support for military conflict. Scholarship has demonstrated that images affect opinions in other areas of political science, including assessments of political candidates and voting (Grabe and Bucy 2009; Graber 2001). The emotional and physiological changes brought on by the viewing of violence should amplify the cognitive effects of what a viewer sees. Indeed, the brain

processes images so quickly that affective responses take place before an individual is conscious of their occurrence (Barry 2005). As a result, violent images of war may routinely shape public support. Nevertheless, as with other media effects, individual-level variables are likely to interact with the effects of violence.

Research design and expectations

To test the effects of violent images on public opinion about war, I conduct an experimental study. Experiments offer an appealing method to test for the effects of ubiquitous war images on public opinion. Experiments eliminate the problem of self-reported overestimations of media exposure (Prior 2008), and allow for control of both content and levels of exposure. With existing opinions randomly distributed and theoretically equalized across groups, differences in levels of support will be the result of the experimental manipulations.

In this study I examine how different presentations of war, both visual and verbal, affect public support for military conflict. A computerized survey experiment is the best tool to test my hypotheses about the effect of television news images of war. By randomly assigning participants to conditions and systematically manipulating the independent variable, I maintain control of external sources of variance (Kinder and Palfrey 1993). The study utilizes a nationally-representative sample to test for the effects of violence. I will discuss the specifics of the research and then report results.

Experimental study

In the experimental study, conducted in January 2011, participants were 840 adults from across the United States. The survey was distributed by YouGovPolimetrix, a nonpartisan polling firm based in Palo Alto, California. YouGovPolimetrix's PollingPoint panel is an opt-in survey panel comprised of 1.5 million U.S. residents. PollingPoint uses the Internet as a platform for polling rather than traditional polling methods. Participants are recruited over the Internet as well, primarily through web advertising campaigns that appear based on keyword searches³². In exchange for their participation, participants earn points that can be redeemed for prizes. By maintaining a database of each participant's demographic information, YouGovPolimetrix employs block randomization to approximate a random sample of all U.S. residents.

Subjects were randomly assigned to one of five conditions: high violence images in a justified frame, high violence images in an unjustified frame, low violence images in a justified frame, low violence images in an unjustified frame, or the control condition (no treatment)³³. Subjects took the study on their own computers at a location of their choosing, linking to the online study through an email invitation.

As subjects began the study, the computer prompted them to follow on-screen instructions. Before random assignment to one of the conditions described above, subjects answered a series of questions on political predispositions (gauging partisanship, ideology and knowledge), emotions, personality, and attitudes. Subjects then were asked

³² Opponents of internet survey methods argue that biases in sampling may occur if the panel is selected over the internet (for example, access is limited to those who are more technologically proficient, and the poor have less access). However, online polling companies can identify problems with traditional survey approaches, such as telephone surveys being based on those at home at the right time and those with landlines, and individuals tend to give socially desirable responses when traditional methods are used (Kellner 2004).

³³ Each condition contained 168 participants.

to watch one of four different three-minute television news stories on Afghanistan that contained the experimental treatments (or they did not watch a video if in the control condition). Following the video, subjects were asked to rate their emotions. They then evaluated a series of questions about Afghanistan which will make up the key dependent variables for the data analysis, as well as questions about media consumption and preferences. To conclude, subjects were debriefed and thanked.

Treatment manipulation

The experimental manipulations occurred within edited television news stories. These stories were based on a real ABC Evening News story from June 13, 2010. The story line involved the upcoming offensive attack of Afghanistan's Kandahar province and the battle's importance to the Afghanistan conflict as a whole. Based on open ended responses to a pilot study³⁴, extra care was taken to use the actual language of real news reports whenever possible, including within the manipulation of the story frame. The edited story used language from several news clips³⁵ to more closely mimic a real television news story, such that 95% of the words from the edited compilation came from actual news transcripts.

The treatments varied in two ways, by amount of violent imagery and by the frame of violence, as justified or not justified in relation to efforts to promote democracy and freedom. Editing was used to vary image content while holding spoken content constant, so that groups one and three, and two and four, received the same verbal

³⁴ The pilot study was conducted in November 2009. Participants were 241 undergraduate students at a private research university. More information on the pilot study is available by contacting the author.

³⁵ Language from the following news programs was used to compile the edited transcript: ABC World News on February 8, 2009. ABC News, Good Morning America on July 3, 2010. NBC Nightly News on July 10, 2010. NBC Nightly News on July 14, 2010.

information, while groups one and two, and three and four, received the same visual information.

Specifically, the stories varied as follows: High violence images consisted of dead bodies, exploding bombs and visible bloodshed from an up close viewing perspective. Low violence images showed landscapes, crowds or patrolling soldiers, but no dead bodies, bloodshed or acts of violence.³⁶ The justified violence frame led subjects to believe that the battle for Kandahar province would be likely to increase security and democracy in Afghanistan, while the unjustified frame portrayed the upcoming battle as promoting skepticism among Afghans in America's ability to bring democracy to Afghanistan. Transcripts of the story, in both justified and unjustified frame treatments, follow. Bold-face words indicate framing effects that vary between treatments.

Justified frame:

Charles Gibson: This week we're going to look at the stakes of the war in Afghanistan, which President Obama has placed at the top of his foreign policy agenda. Martha Raddatz reports on where things stand.

Martha Raddatz: Nine years later, \$210 billion spent, 1,948 international troops dead. But Afghanistan is **freer**. Its people **more** hopeful, and its government **more** democratic than any time since the war began. Security is **improving** as the US is planning to send 30,000 more troops on top of the 32,000 already here. The US **refuses to neglect** this war.

General Mark Milley: We need to improve the security situation in Afghanistan in a very real way, and we also need to improve the perception of security in the minds of the Afghan people, no question about it.

Martha Raddatz: Even though the US has been in Afghanistan for more than 9 years, the last year was by far the most dangerous since 2001. The cloud of violence **comes with a silver lining as Afghans look forward to increased human rights and a better lifestyle**. With the fight for Kandahar looming, the

³⁶ All treatments were pre-tested in advance by a sample of undergraduates to confirm that violent images evoke reactions.

biggest offensive since 2001, the struggle here is expected to be intense. As US soldiers seek local support to combat rising levels of violence, US commanders look for national endorsement. Today, the US flew Afghan President Hamid Karzai to Kandahar. His mission? Convince people to back the single largest operation of the war. “I want your cooperation,” he says. “You have to be brave.”

He asked the Afghan people if they’re with him. But many still have doubts. In the past, the US tried but failed to secure Kandahar. But today, the police and government are **much better equipped**. The US considered Karzai’s call today a **green light**.

General Stanley McChrystal: He looked at the people and he asked them if they were willing to sacrifice and had the, the strength to do this.

Martha Raddatz: And the people came back with **a strong, resounding, indication that they were**. US Commanders say that the goal of the surge is to bring trust and confidence to the Afghan people through better security, and increasingly that’s looking like it’s having **the desired** effect. And so the hard part begins. The battle for Kandahar will be bloody, but fortunately it could lead to greater democracy for all Afghan citizens. **Winning** Kandahar could mean **winning** Afghanistan. Martha Raddatz, ABC News, Kandahar.

Charles Gibson: And we’ll have more on where things stand later in the week.

Unjustified frame:

Charles Gibson: This week we’re going to look at the stakes of the war in Afghanistan, which President Obama has placed at the top of his foreign policy agenda. Martha Raddatz reports on where things stand.

Martha Raddatz: Nine years later, \$210 billion spent, 1,948 international troops dead. And Afghanistan is **less** free. Its people **less** hopeful, and its government **less** democratic than any time since the war began. Security has **deteriorated** to the point where the US is planning to send 30,000 more troops on top of the 32,000 already here. The US **admits it neglected** this war.

General Mark Milley: We need to improve the security situation in Afghanistan in a very real way, and we also need to improve the perception of security in the minds of the Afghan people, no question about it.

Martha Raddatz: Even though the US has been in Afghanistan for more than 9 years, the last year was by far the most dangerous since 2001. The cloud of violence **hovers over Afghans as they see none of the promised changes in their quality of life**. With the fight for Kandahar looming, the biggest offensive

since 2001, the struggle here is expected to be intense. As US soldiers seek local support to combat rising levels of violence, US commanders look for national endorsement. Today, the US flew Afghan President Hamid Karzai to Kandahar. His mission? Convince people to back the single largest operation of the war. “I want your cooperation,” he says. “You have to be brave.”

He asked the Afghan people if they’re with him. But many still have doubts. In the past, the US tried but failed to secure Kandahar. And still today, the police and government are **woefully underequipped**. The US believed Karzai’s call today was **unlikely to affect public sentiment**.

General Stanley McChrystal: He looked at the people and he asked them if they were willing to sacrifice and had the, the strength to do this.

Martha Raddatz: And the people came back with **skepticism and hesitation**. US Commanders say that the goal of the surge is to bring trust and confidence to the Afghan people through better security, but increasingly that’s looking like it’s having **just the opposite** effect. And so the hard part begins. The battle for Kandahar will be bloody, but sadly it is unlikely to further democracy for all Afghan citizens. If so, **losing** Kandahar could mean **losing** Afghanistan. Martha Raddatz, ABC News, Kandahar.

Charles Gibson: And we’ll have more on where things stand later in the week.

Figure 20 shows treatment conditions and number of subjects within each. A full transcript of the experiment can be found in appendix C.

Images and content from the Afghanistan war alone were used in order to hold other influencing factors on public support constant. All adult participants were alike in the sense of sharing some degree of personal familiarity with Afghanistan events, having lived through them. Such is not the case with Vietnam, where younger individuals may have no personal experience with the conflicts. The Iraqi war, while current, is not a good test case because public opinion is already overwhelmingly negative. As such, experimental manipulations are unlikely to change opinion to a great extent. The

Afghanistan war is less salient, and public opinion toward the conflict is much more neutral.³⁷

Control Condition	Treatment 1, 168 subjects
--------------------------	---------------------------

	Justified Violence Frame	Unjustified Violence Frame
Low Violence Images	Treatment 2 168 subjects	Treatment 3 168 subjects
High Violence Images	Treatment 4 168 subjects	Treatment 5 168 subjects

Figure 20: Treatments and subjects of experimental study

Dependent variables

Subjects were asked to answer several questions designed to gauge their level of support for the war in Afghanistan. Responses were coded to run from least supportive of the war to most supportive of the war.

³⁷ This was especially true when the pilot of the experiment was conducted in November 2009. In 2010, the Afghanistan War received more negative media attention, but opinions are still distributed in such a way that many Americans support the conflict..

Data for the dependent variable- support for the Afghanistan war- was derived by combining participants' responses to three questions. The first question served as a broad gauge of support for the conflict.

1. "Do you AGREE or DISAGREE with this statement: All things considered, US involvement in Afghanistan was a mistake?"

To indicate level of support, respondents answer on a five-point scale anchored by "strongly agree" and "strongly disagree." Questions about whether or not a given war is a mistake are some of the most commonly tools used to gauge American public opinion about military conflicts. Gallup used a "mistake" question to measure public opinion throughout the Iraq conflict³⁸

The next two questions asked about specific components of the Afghan conflict. These lines of inquiry function as indirect but relevant measures of support. They are likely to avoid some of the partisan baggage of more direct questions about absolute support for the conflict. As many citizens already have their opinions set about whether they support the Afghanistan conflict in an absolute sense, these questions are more likely to force careful consideration of the issues at hand.

2. "Do you AGREE or DISAGREE with this statement: US involvement in Afghanistan will ultimately increase the personal freedoms enjoyed by Afghans."

To indicate level of support, respondents answer on a five-point scale anchored by "strongly disagree" and "strongly agree."

3. "Has the United States' use of force in the war in Afghanistan been effective?"

³⁸ The Gallup question uses slightly different wording, "In view of the developments since we first sent our troops to Iraq, do you think the United States made a mistake in sending troops to Iraq, or not?"

To indicate level of support, respondents answer on a five-point scale anchored by “not effect at all” and “very effective.”

By using a compiled scale of the three questions rather than just one in modeling determinants of public support, I increase the likelihood of measuring the existing opinions of individuals rather than tapping question wording effects or other artifacts unrelated to actual level of support. Using multiple questions to measure the dependent variable also follows conventional wisdom that states public support for war is best measured by the use of several indicators (Berinsky and Druckman 2007; Burke 1999; Eichenberg 2005). On the resulting scale, individuals’ levels of support ranged from 3 (least supportive of the war) to 15 (most supportive of the war), with a mean of 9.25 and a median of 9. The variation in responses approximates a normal distribution, as seen in figure 21.

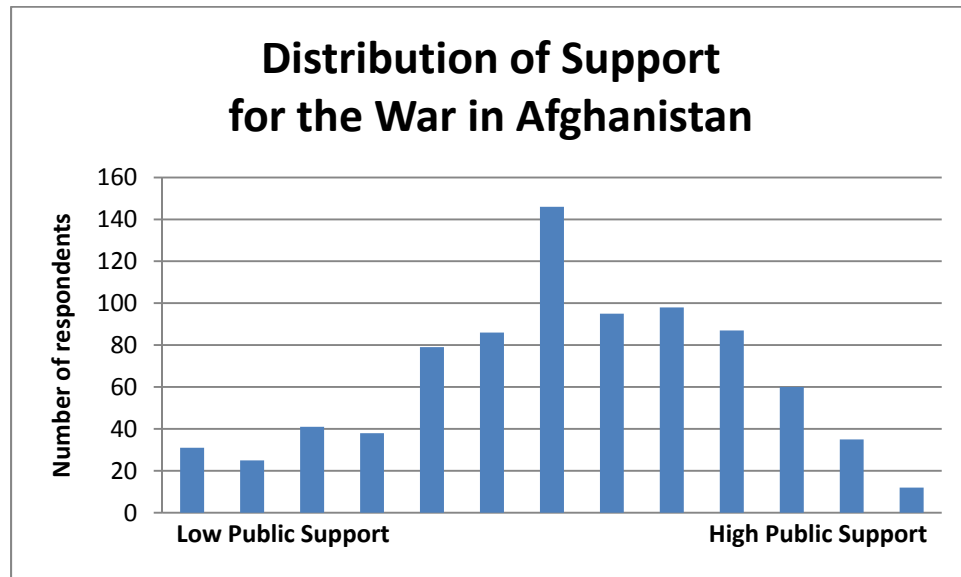


Figure 21: Distribution of support for the war in Afghanistan

Explanatory variables

The primary focus of the data analysis is on the effects of the experimental manipulations of violent imagery and frames. To build further support for the results suggested by the difference of means tests, I model public support for war and include dummy variables for each treatment group and the control group. If violent images uniformly suppress support for war, exposure to violent images should decrease support across high violence treatment groups, reflecting the following expectation:

H1: Exposure to high levels of violent war imagery in television news will decrease support for war.

I ask a number of control questions and include independent variables to control for each of them. I anticipate individuals identifying themselves as Democrats are less likely, and Republicans are more likely, to support the war. Independents and others should fall somewhere in between (Baum 2002). The variable *PartyID* ranges from 1 (very strong Democrat) to 7 (very strong Republican). Ideology should also play a role in decisions about war support. The variable *Ideology* ranges for 1 (very liberal) to 7 (very conservative). Expectedly, those participants who embrace conservative political ideology should be more likely to support war.

Gender also matters in decisions about war, as women tend to be conflict averse compared to men (Eichenberg 2003; Nincic and Nincic 2002). The dummy variable *Female* is set at 1 for females and 0 for males. I ask one question about feelings toward the future of the United States. This variable, *Pessimism*, ranges from 1 (very optimistic) to 5 (very pessimistic). I expect those individuals predisposed to view U.S. affairs in a pessimistic way to have lowered opinions about the war.

Political knowledge has been shown to be an important factor in mitigating the effects of information-based experimental manipulations (Kam 2005). Political knowledge also may limit the influence of the effects of violent images. That is, for individuals who possess higher levels of knowledge about Afghanistan, violent pictures-like other media effects- are noticeable, but do not overshadow existing storehouses of additional information (Gartner 2008). Political knowledge is also positively correlated with increased support for war. Although the reasons are not fully understood, many studies have shown that higher levels of knowledge increase the likelihood that citizens will support war. This finding has held for wars including World War II (Berinsky 2009), the Vietnam War (Verba et al 1967; Zaller 1992) and the Persian Gulf War (Iyengar and Simon 1994; Zaller 1996). Thus, I create the variable *PoliticalKnowledge*, using a battery of seven multiple choice and open-ended questions³⁹. The variable takes values from 0 to 7 depending on the number of questions answered correctly.

The variable *Veteran* is coded 1 for those respondents who identify themselves as veterans of the Armed Forces, and 0 otherwise. I expect veterans to show heightened levels of support for military conflict (Feaver and Gelpi 2004). I also create a variable to capture the number of days a week that subjects watch television news. This variable, *DaysTVNews*, ranges from 0 to 7 and can account for subjects who are bombarded with violent images on a regular basis. Finally, I construct variables for demographic characteristics, including *Education*, *Age*, *ChildrenUnder18*, and *Income*. These variables will serve as controls in the study. As the model accounts for party

³⁹ Multiple choice questions asked respondents about the responsibilities of various political officials. Opened ended questions named a politician and asked respondents to identify his or her position. Exact question wording can be found in Appendix C.

identification that might otherwise correlate with some of these variables, I have no expectations for their behavior.

Results

A comparison of means of the dependent variable across treatment conditions reveals that the some of the treatment conditions affected the amount of public support for Afghanistan expressed by participants. The control group's level of support for Afghanistan was 9.55. Only the low violence, justified frame treatment group exhibited higher levels of support for the conflict, with a mean of 9.85. The other treatment groups displayed less support for Afghanistan relative to the control. Participants in the low violence, unjustified treatment averaged 9.47. The level of support in both of these treatment conditions is not statistically distinguishable from the control group.

However, those subjects in the other two treatment groups displayed statistically significant differences in levels of public support for Afghanistan. In the high violence, justified frame treatment group participants had a mean support score of 8.88. Participants in the high violence, unjustified frame group exhibited the lowest levels of support at 8.49. Mean public support scores for each treatment group are found in table 13. Because of the random sample, note that other characteristics that typically predict levels of public support for war are equally distributed across groups.

Although the analysis of aggregate data in the previous chapter suggested an interaction effect might exist between violent imagery and frame, these data suggest that is not the case. When evaluating the data apart from the control group, imagery and frame both appear to have effects, but they are independent of one another. When

holding frame constant, exposure to highly violent imagery lowers the mean support score by approximately one point compared exposure to low violence images. This holds for participants in both the justified and unjustified treatment conditions. Likewise, when holding violent imagery constant, those participants in the justified frame conditions expressed higher levels of support for war (about 0.3 of a point) than those in the unjustified frame conditions. The size of the effect of violent imagery is more than triple the effect of framing.

Table 13: Differences of means of key variables

	Control Group	Low violence, justified	High violence, justified	Low violence, unjustified	High violence, unjustified
Dependent Variable					
Level of support for Afghanistan	9.55	9.85	8.88*	9.47	8.49*
Independent Variables					
Party ID	3.97	3.77	3.88	3.97	3.85
Ideology 3.40		3.25	3.61	3.32	3.44
Education 3.46		3.34	3.42	3.29	3.35
Gender 1.53		1.49	1.52	1.52	1.51
Income 8.45		8.36	8.05	7.79	8.15
Age 49.90		48.92	48.13	49.79	50.77

*Statistically distinguishable from the control group

A close look at a question gauging support for Afghanistan again shows that exposure to a treatment condition high in violent images suppresses support for the war. Participants were asked if U.S. involvement in Afghanistan will ultimately increase the personal freedoms enjoyed by Afghans. Of all participants exposed to an experimental

treatment high in violence (high violence/unjustified and high violence/justified), 27.67% indicated a response against the war (disagree or strongly disagree with the statement), while 19.5% of those exposed to low violence gave the same response. The 8.17% difference is statistically significant a $p < 0.01$. Even more indicative of the effects of violence, subjects in the high violence/unjustified frame condition displayed greater dearth of support compared to low violence/unjustified frame subjects, with 35.12% opposing the war in the violence condition and 22.02% opposing in the low violence treatment group. Again, the difference between groups (12.96%) is statistically significant at $p < 0.01$.

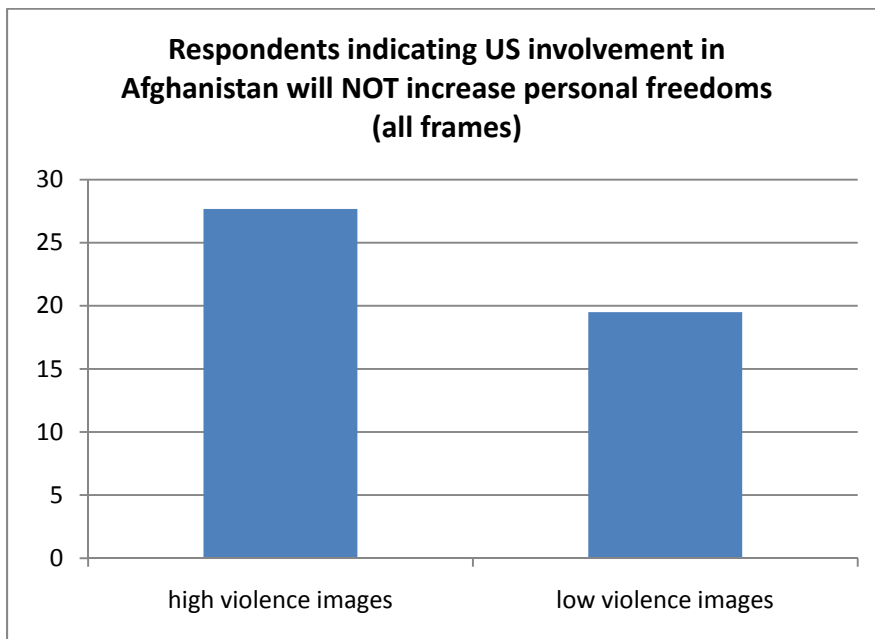
Subjects given a violence treatment within the justified frame were exposed to competing forces. The negativity of the violence was partially counteracted by the positivity of the justified frame. Of those in the high violence/justified condition, 20.24% opposed the war, while 14.29% in the low violence/justified condition gave the same response. This difference of 5.95% has marginal statistical significance at $p < 0.1$. Figure 22 illustrates these results. This analysis lends support to the hypothesis that violence suppresses support for war.

In addition to producing differences in levels of support for the Afghanistan war, I expected measures of exposure to images of violence and frames to further our overall understanding of individual determinants of public support for war. If such is the case, reactions to violent images and frames should behave in an expected fashion with other known individual-level predictors of war support. To test this, I regressed war support for Afghanistan⁴⁰ on a set of predictor variables. The independent variables of most

⁴⁰ Dependent variable is measured through the three-item compilation of support questions discussed in the previous section.

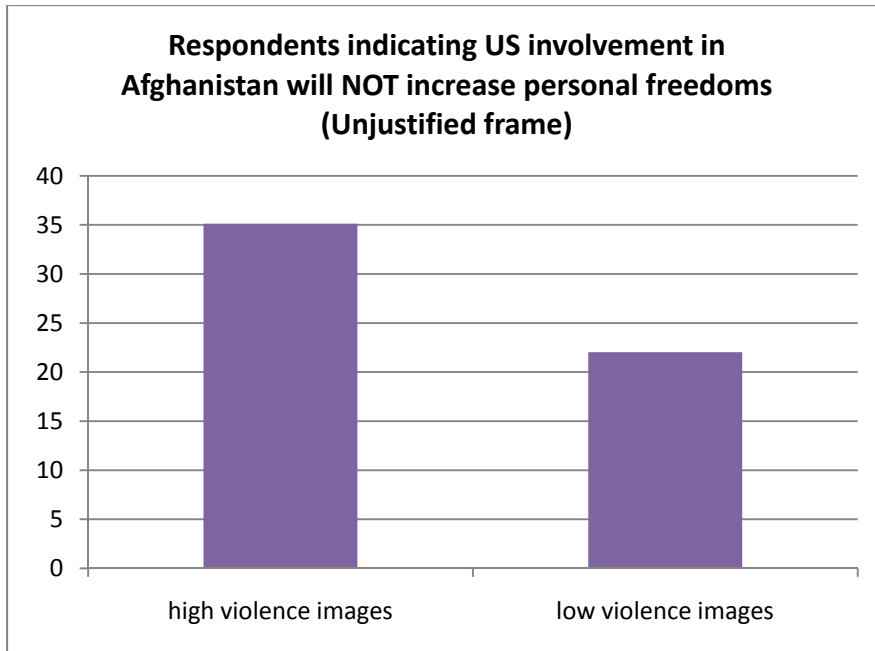
interest are the dummy variables representing experimental treatments. As controls, the model also employs independent variables for gender, party identification, ideology, pessimism toward the future of the United States, political knowledge, veteran status, days a week watching television news, education, age, children under age 18 and income. The results of these analyses are displayed in table 14.

Question: Do you AGREE or DISAGREE with this statement: US involvement in Afghanistan will ultimately increase the personal freedoms enjoyed by Afghans.

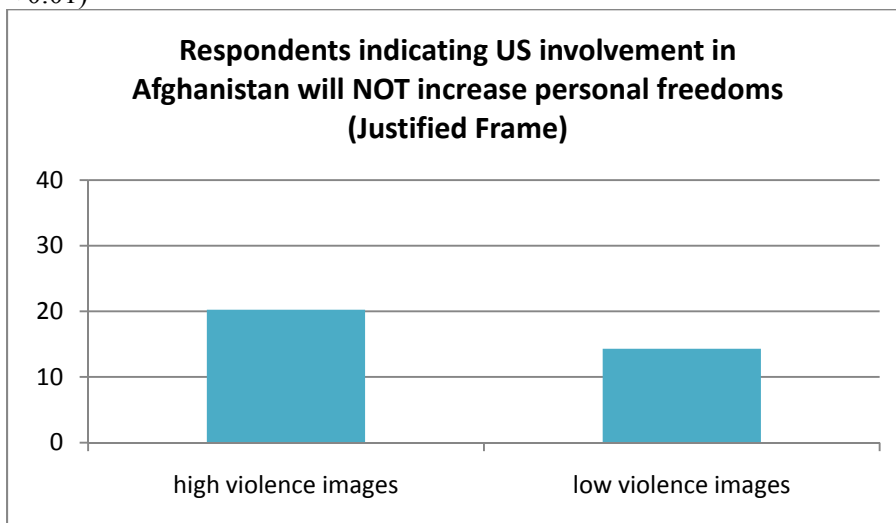


High violence images suppressed support for Afghanistan by 8.17% (statistically significant at $p < 0.01$)

Figure 22: Violence suppresses support for Afghanistan



High violence images suppressed support for Afghanistan by 12.96% (statistically significant at $p < 0.01$)



High violence images suppressed support for Afghanistan by 5.95% (statistically significant at $p < 0.1$)

The key finding is that experiment treatments had observable effects on participants' levels of support for war. In regard to the variable of most interest- images of violence- there is support for hypothesis one. Exposure to high levels of violent war imagery in television news decreases support for war. These effects are most apparent in

Table 14: Predicting support for war

Coefficients		Standard Errors
Low violence, justified frame	0.48*	0.29
Low violence, unjustified frame	-0.53* 0.29	
High violence, justified frame	0.13 0.29	
High violence, unjustified frame	-1.00*** 0.28	
Female -0.41**		0.21
Party ID	0.31***	0.05
Ideology 0.22***		0.08
Pessimism -0.37***		0.08
Political Knowledge	0.17***	0.05
Veteran 0.35		0.25
Days TV News	0.08**	0.04
Education 0.01		0.06
Age -0.01*		0.01
Children under 18	-0.18 0.21	
Income 0.01		0.02
Constant 8.29***		0.69
Number of cases	827	
Adjusted R-squared	0.17	

Entires are OLS regression coefficients with standard errors in following column. The dependent variable is coded so that a higher score indicates a greater level of support for the war in Afghanistan. *p < .10; **p < .05; ***p<.01

conjunction with the unjustified frame, as violence and unjustified frame work individually and in the same direction to lower support for war. Other key comparisons among independent variables merit further explanation below.

Effects of framing

Overall, the effects of framing behave as expected. Unjustified frames of violence decrease support for Afghanistan, while justified frames increase support for the conflict. These outcomes are most apparent when comparing the effects of frame within violence treatments. For example, treatment groups 2 and 3 both received images low in violence. Holding images constant, the frame alone caused treatment group 2 (low violence, justified frame) to express more support for war than the control group, while group 3 (low violence, unjustified frame) demonstrated less support relative to the control group. In the same way, treatment groups 4 and 5 both received images high in violence. Those in group 5 (high violence, unjustified frame) expressed sizable and statistically significant decreases in support relative to the control group. Though group 4 (high violence, justified frame) is not different from the control group in their expressed support, they display higher support for Afghanistan than group 5. These results suggest that highly violent images can either counteract or increase the influence of frames. As framing is a known and powerful factor in shaping public opinion, this finding is of great consequence.

Effects of violent images

The effect of highly violent images in the unjustified frame condition serves to further decrease support for Afghanistan beyond the lowering of public support caused by the frame alone. These effects are the largest of any of the treatment groups. Findings of this study show that highly violent images within justified frames of violent still serve to suppress support for war. This goes directly against the second set of hypotheses advanced in Chapter 4, that violence in a justified frame might increase support by drawing more attention toward the positive frame. Instead, the positive effects of the frame appear to be mitigated by negative effects of the violence. Whereas the justified frame of violence bolsters support for war relative to the control group when low violence images are present, the positive changes in support caused by justified framing disappear when combined with highly violent images.

Control variables behaved largely as expected. Republicanism, conservative ideology and political knowledge predicted increased support for the war. Female gender and pessimism toward the future of the United States predicted decreased support. Income and education had no measurable effect, nor did veteran status despite its typical power to boost support. Days a week spent watching TV news predicted increased support for war, while those individuals older in age were less likely to favor the war.

Conclusion

This experimental study offers the opportunity to advance our scholarly understanding of the public's support for war. By sorting out causation through experimental design, I can offer new insights to important questions about the effects of

violent imagery on public opinion. The study shows that violent images suppress public support for war regardless of frame. Two realities exist in today's media environment. One, violence in television news is now common place. Images of violence inundate citizens' living rooms as news programs are broadcast across America. Two, today's coverage of war tends toward the negative. When considering these facts together, the findings of this research seem particularly important. Violent images like the ones in these experiments reach the citizenry on a consistent basis, and researchers should consider their effects when modeling public support for war.

It is essential to note that while many scholars have demonstrated the influence of media framing, very few have systematically examined how visual information influences viewers apart from framing effects. These experimental studies build a foundation for the role of imagery in public opinion formation, establishing a measurable role of violent images in the formation of public support for war.

Technology will only expand, bringing more and more images of violence into our homes and our consciousness. The intellectual merit of this project seems especially clear as the public and our leaders wrestle with the Iraqi and Afghanistan conflicts. In fact, the impact of these findings may extend beyond the academy. Policy makers should find the results of value as they struggle with finding the kinds of policies that the public will support. The next and final chapter of this dissertation explores these ideas as I conclude.

CHAPTER VI

CONCLUSIONS

Violence and military conflict go hand in hand. Often the simple mention of a war will bring to mind a picture of the horrors of battle. In some ways the Vietnam War has become synonymous with the widely-disseminated photograph of a naked little girl, screaming as she runs from her napalm-covered village (see figure 1). Likewise, it is difficult for some to think of the Iraq war without envisioning rows of flag-covered coffins in the hull of an aircraft carrier (see figure 2). We remember these images because they touch us deeply. We react to them emotionally. They affect the way we think about war.



Figure 23: Vietnam photo: young child running



Figure 24: Iraq photo: flag-draped coffins

This dissertation has examined the relationship between images of violence in war and public support for military conflict. It demonstrates that violent images do affect public opinion, separate from spoken content alone. The impact of news visuals deserves attention in large part due to their overwhelming prevalence on television news today. Compared to the Vietnam Era, the amount and degree of violence on today's news programs has increased exponentially, as seen in Chapter 2. Today's viewers of television news see images of injury in more than 56% of war stories, compared to just 16% during the Vietnam War. The degree of violence in modern news images is quite high, showing moderate or strong violence in over 40% of stories. Vietnam news produced similar degrees of violent imagery in just 7% of reports. These images of

violence permeate cable news outlets as well as network programs. Although cable news programs CNN and Fox News show similar levels of violence, the length of their stories and type of commentary shades the overall effect of the violence, as shown in Chapter 3.

The violent imagery in television news affects aggregate support for war, although as observed in Chapter 4, these effects depend largely on how news reporters justify the reasons for violent actions in the spoken content of their reports. More extreme effects are observed when the violence is framed repeatedly in the same fashion over a period of time. In such cases, images of violence can shift aggregate public support in meaningful ways. Empirical tests in Chapter 5 provide further evidence of the effects of violent images at the individual level, suggesting that high degrees of violence suppress public support for war regardless of frame. Images of violence changed an individual's level of support for war between 6% – 13% on a 100-point scale.

As a result of these findings, we now know more about how the public develops opinions and beliefs about military engagements. Visual information is an important though often overlooked component of public opinion formation. In and of themselves, violent images evoke emotional reactions that shift levels of public support beyond what occurs through the processing of spoken or written information. Models of public support for war should be revised in such a way that consider the impact of violent images.

Contributions

One of the biggest stumbling blocks to including visuals in studies of political communication has been measurement. Scholars have made vociferous calls for more research on the importance of imagery for upwards of twenty years. Though some projects made important contributions to the study of images, no method for measuring images gained a foothold in the field (Grabe and Bucy 2009). Coding methods suffered from being too specific and difficult for others to replicate, or too broad to offer detailed insights into political processes and decision making.

The coding method I advance in Chapter 2 is an important contribution of this dissertation. My method, which modifies a coding scheme used in research on the effects of violence in video games and translates it for use by social scientists, is both systematic and reproducible. By measuring violence in five different ways- portrayal of personal injury, portrayal of death, explicitness, graphicness and length of violence- I obtain a highly specific yet practical measure of violent images. This research establishes a foundation on which future research projects can build models of support for war that consider both verbal and visual information.

A second contribution of this dissertation is the data from content analysis of television news in Chapter 2 and Chapter 3 using the above coding scheme. The data set analyzes ABC, CBS and NBC coverage of the Vietnam War and the Iraq War, as well as CNN and Fox News coverage of the Iraq War. Over 1,350 days of war coverage are analyzed, resulting in one of the first detailed content analyses of network news coverage of war over time. The data set is the first to measure specifically violent images of war on nightly television news programs, and it provides information on variation between

news networks and changes in coverage of war over forty years. These data make an important empirical contribution to the field of political communication, as well as mass communication more broadly, by detailing the evolution of television news stories of war.

Given the enormous change in violent images on modern television news programs since the Vietnam War, as demonstrated in these chapters, it stands to reason that a change in our conception of public support for war is warranted as well. Today's television news consumer is inundated with imagery on an almost constant basis. In regard to stories of war, the high level of violence in these images makes them especially evocative of emotion and likely to prime later judgments regarding opinions of a conflict. While an individual's reaction to violence will vary from person to person based on her unique experiences and personal characteristics, all individuals are alike in that they process visual information in the brain more quickly than words. This primacy of vision causes emotional reactions to linger within a person's consciousness, making it largely responsible for observed shifts in the public's opinions.

While the methodological improvements and empirical findings discussed above ground the dissertation, the findings from chapters 4 and 5 make a theoretical contribution to the literature on framing. Past research has shown that framing can be successful in activating desired considerations, and we know that news reporters often frame reports of political news with the aim of promoting a certain world view (Entman 1993). We know less about how other media techniques can impede or facilitate framing effects. To add to this body of work, I show that violent images work in conjunction with frames to cause shifts in public opinion. By considering visuals in tandem with a frame,

at least at the aggregate level, we observe different effects than if we had measured the effects of framing alone.

Chapter 4 provided evidence of this phenomenon in an aggregate analysis of American public opinion about the Iraq war. When television news programs showed high levels of violent images, aggregate public support moved up to 13 points on a 100-point scale. Violent images are capable of manipulating public sentiments in both positive and negative directions, depending on the frame applied to the violence. Images of extreme violence appear to capture viewers' attention beyond what would normally take place, increasing the capacity of story frame to affect public support.

As suggested by the experimental data in Chapter 5, the vividness of war images attracts viewers to pay increased attention to the news stories in which the images are shown. The influence of violent images appears most strongly in conjunction with unjustified frames. The negativity of both the images and the frame amplify one another, leading to the significant suppression of public support compared to framing effects alone. Effects of violent images continue to suppress support when they are framed as justifiable actions, although the negative effects of violent images are counteracted by the positive effects of a justified frame, causing the two treatments to cancel each other out. Evidence of this can be seen in tests of subjects' emotions immediately after viewing high levels of violence. For subjects in conditions high in violent images, negative emotions increased even for subjects in the justified frame condition (though the increase was not as high as for subjects in the unjustified frame condition). As visuals have a constant presence in the modern media environment, this information is essential for understanding the framing effects of television news.

By studying the role of violent images through the lens of both aggregate and individual level data, I make a strong case for the validity of this dissertation. The individual-level data produced from the experimental study provide a high degree of internal validity. By isolating the effects of violent images in a controlled environment, I observe measurable and image-specific effects. The aggregate-level data from Chapter 4 provide external validity. The persistence of aggregate effects in a diverse sample yields convincing evidence that the effects of images endure beyond a laboratory environment and into the real world.

Implications

Implications for understanding news media

Understanding images as a form of opinion-altering information will require questioning and then changing entrenched assumptions about what information news media provide. Traditionally, political scientists have understood and studied media through words. Both the sending and receiving of political messages was thought to take place primarily through verbal communication. But looking at political issues in such a manner grossly narrows the actual scope of politics. Individuals can and do form opinions and garner knowledge as a result of their experiences viewing political images.

There are several compelling reasons to take visuals seriously. In today's new media environment, saturated with visual information, the role of media has changed. Unlike during the Vietnam era, images are now a fundamental component of news consumption. Psychological evidence shows that individuals rapidly make inferences

from the images that they see. These inferences affect the subsequent processing of information, even if individuals themselves are not consciously aware of the visual influences taking place (Damasio 1999). In this way, images complement verbal information to shape the criteria by which citizens evaluate war. Neither words nor visuals exert sole influence on what a media consumer takes away from watching news. Instead, words and visuals each affect public support for war. Nevertheless, distinctions can be made between information gleaned from words versus visuals. These distinctions can be made in regard to cognition, biology and culture.

On a cognitive level, images are easier to recall than words (Barry 2005). Additionally, whereas information taken from words is most useful in conjunction with a political schema, visual information is primarily independent of such frameworks (Grabe and Bucy 2009). Those without a foundation of political knowledge can still derive useful knowledge from images. Finally, images allow for quick inferences of relevant information (Newell 1990), including information relevant to politics, whereas words provide for similar inferences at a comparatively slower rate. Regardless of someone's cognitive ability, she is more likely to receive and retain information from images.

In regard to biology, images have much longer history in the evolutionary process than do words (Parker 2003). Specialized centers in the brain exist solely for visual processing; no equivalent brain centers are present for reading (LeDoux 1996). While words are processed only at the cognitive level, at a rate of 500 milliseconds and above, images are sorted cognitively and biologically. Within the biological band of processing, sorting takes place ten times more quickly than cognitive assessments, at 50 milliseconds and above (Libet et al 1991).

The place of images and words within the American culture is also distinct. Words are viewed as an indicator of intellect, while images are less esteemed (Briggs and Burke 2005; Lesy 2007). For example, suppose there are two men, a highly paid stockbroker and a Union coal miner. One gets news from reading the New York Times and the other watches network television news. Which one would you guess watches television news? Because elite sophisticates are more associated with reading the New York Times than watching network television news, most people would likely guess the miner watches TV news. Words in culture are exclusionary. They divide the public into social classes, those with high vocabularies and reading comprehension and those without (McChesney 2004). Images, to the contrary, are equalizing. Everyone can understand them.

All of these reasons highlight the importance of considering imagery as an information source in modern media. Taken together, there is support for the notion that images are, at minimum, as useful as words in spreading the types of political knowledge that are essential for the proper functioning of a democracy. If democratic ideals truly value the participation of *all* citizens, models of public support must be altered in ways that consider visuals as a tool for gaining political information. Existing models of public opinion in political science must continue to move forward, painting a more detailed and complete portrait of the American news consumer. While studies in mass communications have done work to investigate the role of images, my study adds a new systematic measure than advances what we know about images in the fields of both political science and communications. Television news and other image-laden media

may positively affect the inner-workings of democracy in ways not previously considered.

Implications for understanding the responsiveness and accountability of political leaders

News images play a part in determining whether the public will back political leaders and their decisions. As political leaders wrestle with the kinds of policies the public will support, they consider the public's potential reactions to violent imagery. The past actions of Presidents and other political leaders indicate that they think images matter in shaping public sentiment. The photographs of military coffins referenced briefly at the beginning of this chapter are prime examples of this type of behavior. In 1991, President George H. W. Bush enacted a policy which banned news photographs of coffins or similar items that held the remains of American military personnel as they arrived at Delaware's Dover Air Force Base from the Middle East. For eighteen years, with relatively few exceptions, the media were prohibited from photographing or filming these flag-draped coffins. While President Bush said the policy was designed to protect the privacy of families of the dead, many political activists and most media organizations saw political motivations behind the ban. Was President Bush fearful that images of coffins would lower support for his Persian Gulf War? The ban was lifted by President Barack Obama in late February 2009, with the reasoning that freedom of the press was paramount. Still, Obama had made his stance against involvement in Iraq known throughout his campaign for President and into his Presidency. Would he had lifted the ban had it not advantaged him politically?

This begs the question: how much war violence will the public tolerate? Imagine if today's media existed during the United States Civil War. Over 625,000 war deaths occurred during the four years of that conflict, with an average of 428 casualties per day for every single day of the war. Suppose television news crews were present for the Battle of Gettysburg in Pennsylvania during July of 1863, where more than 51,000 casualties occurred over the three day struggle. Images of such carnage would have filled every inch of viewers' television screens. Moreover, the magnitude of the atrocity would have merited around the clock news coverage. How long would the public have supported the war if they were exposed to that level of violence on a regular basis?

Would such a blood bath be permitted by today's society? If even a fraction of the number of lives lost at Gettysburg were taken during a battle in Afghanistan, news networks would flood American media with images of the violence. A severe reaction from the public would be inevitable. People would decry the conflict in mass numbers. Conceivably, they would take to the streets in protest, demanding that political leaders end United States involvement in the conflict immediately. If leaders failed to respond, their political futures would certainly be in jeopardy.

But, just as reactions to everyday war violence on television news are dependent on frames, the public's reaction to levels of extreme war violence is likely also dependent on the stakes of the conflict. Whereas United States involvement or victory in Afghanistan is not essential to its existence, some wars have much more consequential outcomes. If the United States were invaded and its sovereignty questioned, perhaps no human costs would be too high to ensure our freedom. For lesser causes, (i.e., anything

short of a foreign invasion) on the other hand, the American public would likely erupt with outrage and calls for impeachment if a President did not end the war immediately.

Though these scenarios are hypothetical, they demonstrate the high probability that violent images have a role in the responsiveness of political leaders. Politicians know that reporters and their high-tech equipment will be embedded with troops in today's wars. The public will undoubtedly see heightened levels of violence as a result of their presence. As evidenced by support for Iraq dwindling more quickly than support for Vietnam in spite of far fewer casualties, seeing violence matters in shaping public support.

As shown in Chapter 5, it is possible for the negative effects of violence to be mitigated by positive framing. The media can broadcast high levels of violent imagery (at least to a point) without suppressing support for war *if* the violence is talked about in a way that justifies its occurrence. Historically, however, as shown in Chapters 2 and 4, the media are only likely to do this while overall support for the war remains high. As political leaders look ahead to reelection for themselves or their party, this fact that war violence can and often does suppress popular Presidential support helps hold them accountable to the American public.

If the public helps hold politicians accountable, who then ensures responsible behavior by the media? The media has a large degree of discretion in showing images of violence. As discussed in the opening example of this dissertation, sometimes media outlets are divided in their decisions as to whether certain events are too violent for the public to see. In the introductory example, Fox News deemed the violence against U.S. civilians too terrible to broadcast. Conversely, CNN chose to show viewers horrific

images of the violence, bucking even the White House's plea to cover the event responsibly. Indeed, sometimes media outlets appear to seek out the most extreme violence in order to shock the public.

The decentralization of the press enables new networks to cater to the preferences of their target audiences, whatever those may be. When faced with hard decisions about whether or not to broadcast extreme images of violence, news networks may consider the kinds of reports their viewers want to see. Perhaps it was not a coincidence that Fox News' decided not to broadcast images of the bodies of the civilian contractors while CNN freely aired them. Fox News is ostensibly more supportive of the war, and the terrible images would not have helped their cause. CNN, on the other hand, had no desire for the public to approve of U.S. involvement in Iraq, and their lack of censorship may have been influenced by such considerations. Given that few constraints exist to limit the amount or degree of violence that media outlets chose to show, our best course of action is to continue to seek understanding of how media broadcasts affect the public.

Final thoughts

News imagery transmits substantive political information to television news consumers. Consequently, it should be viewed as a viable source of political knowledge, acting in tandem with verbal cues to shape public opinion. The visually informed news consumer uses an array of verbal and visual information from television news and other sources to form opinions about foreign policy and the world around her. News consumers informed by visual information may not hold high levels of technical knowledge about given conflicts or historical memories of why the conflicts occurred,

but they may be surprisingly proficient at piecing together the information they do have to make a well-informed assessment of war.

As videos and their accompanying images increasingly permeate the Internet, there is even more reason for scholars to evaluate the influence of visual information. It is questionable if television news will remain the number one source of political information throughout the next century. Indeed, in my experimental study, 53% of citizens between 18 and 29 listed online sources as their primary supplier of news. Nevertheless, images will certainly remain on the forefront of politics in some form or another. As the younger generations flock to the Internet for social networking, news and the sharing of all types of information, considering visuals will become increasingly essential to our understanding of public opinion formation and democratic discourse more generally.

APPENDIX A

CHAPTER II APPENDIX

TABLE 1

Violence in network television news:
Aggregate of ABC, NBC, and CBS Evening News

VIETNAM

<u>injury</u>	<u>N</u>	<u>Percent</u>	<u>Cum.</u>
0	97	52.72	52.72
1	57	30.98	83.70
2	17	9.24	92.93
3	10	5.43	98.37
4	3	1.63	100.00

<u>death</u>	<u>N</u>	<u>Percent</u>	<u>Cum.</u>
0	1	20	65.22
1	5	1	27.72
2	12		6.52
3	1	0.	54
			100.00

<u>explicit</u>	<u>N</u>	<u>Percent</u>	<u>Cum.</u>
0	1	00	54.35
1	5	3	28.80
2	10		5.43
3	21		11.41
			100.00

<u>graphic</u>	<u>N</u>	<u>Percent</u>	<u>Cum.</u>
0	1	65	89.67
1	8	4	.35
2	11		5.98
3	0	0.	00
			100.00

IRAQ

<u>injury</u>	<u>N</u>	<u>Percent</u>	<u>Cum.</u>
0	41	16.87	16.87
1	65	26.75	43.62
2	40	16.46	60.08
3	85	34.98	95.06
4	12	4.94	100.00

<u>death</u>	<u>N</u>	<u>Percent</u>	<u>Cum.</u>
0	8	7	35.80
1	8	0	32.92
2	2	73	30.04
3	3	1.	23
			100.00

<u>explicit</u>	<u>N</u>	<u>Percent</u>	<u>Cum.</u>
0	4	0	16.46
1	2	6	10.70
2	2	9	11.93
3	1	48	60.91
			100.00

<u>graphic</u>	<u>N</u>	<u>Percent</u>	<u>Cum.</u>
0	1	35	55.56
1	1	39	16.05
2	5	2	21.40
3	17		7.00
			100.00

Amount of Violence, In Seconds

	<u>N</u>	<u>Mean</u>	<u>SD</u>	<u>Min</u>	<u>Max</u>
<u>Acts:</u>	184	2.15	9.74	0	90

Precursor

<u>acts:</u>	184	0.98	5.05	0	45
--------------	-----	------	------	---	----

<u>Injury:</u>	184	2.76	11.21	0	90
----------------	-----	------	-------	---	----

Amount of Violence, In Seconds

	<u>N</u>	<u>Mean</u>	<u>SD</u>	<u>Min</u>	<u>Max</u>
<u>Acts:</u>	243	9.22	14.46	0	120

Precursor

<u>acts:</u>	243	2.80	5.75	0	40
--------------	-----	------	------	---	----

<u>Injury:</u>	243	6.20	9.17	0	45
----------------	-----	------	------	---	----

TABLE 2

Characteristics of network television news stories of war:
Aggregate of ABC, NBC, and CBS Evening News

VIETNAM

lead stories: war		N	Percent		
0 (no lead)		139		43.03	
1 (lead)	1	84	5	6.97	
intensity		N	Percent		t
0	1	38	4	2.72	
1	7	3	2	2.60	
2	1	12	3	4.67	
perpetrator		N	Percent		
1 (American)		24		27.91	
2 (Enemy)		32		37.21	
3 (civilian)		1		1.16	
4 (mix)	27		31	.40	
9 (unknown)	2			2.33	
target		N	Percent		nt
1 (all American)		23		27.06	
2 (mostly American)		8		9.41	
3 (Am.&enemy)		21		24.71	
4 (mostly enemy)		9		10.59	
5 (all enemy)		9		10.59	
8 (all civilians)		13		15.29	
9 (target unknown)	2			2.35	
casualties		N	Percent		
0		119		64.67	
1		65		35.33	
justified violence		N	Percent		
-1 (unjustified)		25		28.74	
0 (no frame)		31		35.63	
1 (justified)		31		35.63	
evaluative tone		N	Percent		
-1 (negative)		30		16.30	
0 (neutral)		135		73.37	
1 (positive)		19		10.33	
general news		N	Percent		
0 (per. interest)		1		0.54	
1 (general)		183		99.46	

IRAQ

lead stories: war		N	Percent		
0 (no lead)		215		46.94	
1 (lead)	2	43	5	3.06	
intensity		N	Percent		t
0	2	15	4	6.94	
1	1	67	3	6.46	
2	7	6	1	6.59	
perpetrator		N	Percent		
1 (American)		48		23.65	
2 (Enemy)		107		52.71	
3 (civilian)		2		0.99	
4 (mix)	42		20	.69	
9 (unknown)	4			1.97	
target		N	Percent		nt
1 (all American)		18		8.87	
2 (mostly American)		41		20.20	
3 (Am.&enemy)		38		18.72	
4 (mostly enemy)		18		8.87	
5 (all enemy)		26		12.81	
8 (all civilians)		53		26.11	
9 (target unknown)	9			4.43	
casualties		N	Percent		
0		83		34.16	
1		160		65.84	
justified violence		N	Percent		
-1 (unjustified)		135		66.18	
0 (no frame)		25		12.25	
1 (justified)		44		21.57	
evaluative tone		N	Percent		
-1 (negative)		69		28.40	
0 (neutral)		138		56.79	
1 (positive)		36		14.81	
general news		N	Percent		
0(per. interest)		6		2.471	
1(general)	23	7		97.53	

APPENDIX B

CHAPTER III APPENDIX

NETWORK DIFFERENCES IN COVERAGE OF WAR: ABC, CBS AND NBC

Percentage of Days with Lead stories on War

N	Vietnam		Iraq	
	Percent	N	Percent	N
CBS 51	53.68	64	50.79	
ABC 76	58.46	106	57.61	
NBC 57	58.16	73	49.32	

*Differences of means tests show no statistically significant differences.

Intensity of War News: Number of Lead Stories on War per Broadcast

	Vietnam				Iraq*		
	# lead stories	0	1		2	0	1
CBS	43	19	33	(49%)	62*	48*	16*
		(45%)	(20%)	(35%)		(38%)	(13%)
ABC	54	37	39	(42%)	78*	66*	40*
		(42%)	(28%)	(30%)		(36%)	(22%)
NBC	41	17	40	(51%)	75*	53*	20*
		(42%)	(17%)	(41%)		(36%)	(13%)

*During the Iraq War only, difference of means tests show ABC differed from NBC (significant at 0.05 level) and CBS (significant at 0.10 level), offering more intense news coverage of war than the other networks.

Percentage of Lead Stories featuring War Casualties

N	Vietnam		Iraq	
	Percent	N	Percent	N
CBS 51	33.33	64	64.06	
ABC 76	38.84	106	63.21	
NBC 57	35.09	73	71.23	

*Differences of means tests show no statistically significant differences.

Percentage of Lead Stories reporting General News

N	Vietnam		Iraq	
	Percent	N	Percent	N
CBS 51	100.00	64	100.00	
ABC 76	98.68	106	96.23	
NBC 57	100.00	73	97.26	

*Differences of means tests show no statistically significant differences.

Differences in Framing of War Violence: CBS, ABC, NBC

Frame	Vietnam			N	Iraq		
	unjust	neutral	just		unjust	neutral	just
CBS 9	8 (36%)	8 (32%)	8 (32%)	32	8 (60%)	13 (15%)	13 (25%)
ABC 9	11 (26%)	11 (32%)	14 (41%)	58	10 (65%)	10 (11%)	21 (24%)
NBC 7	12 (25%)	12 (43%)	9 (32%)	45	7 (73%)	7 (11%)	10 (16%)

*Differences of means tests show no statistically significant differences.

Differences in Tone of Reports of War: CBS, ABC, NBC
(In relation to the stated position of the President)

Vietnam				Iraq			
Frame	negative	neutral	positive		negative	neutral	positive
CBS	11 (22%)	33 (65%)	7 (14%)	13 (20%)		41 (64%)	10 (16%)
ABC	17* (22%)	51* (67%)	8* (11%)	34 (32%)		54 (51%)	18 (17%)
NBC	2* (4%)	51* (89%)	4* (7%)	22 (30%)		43 (59%)	8 (11%)

*Differences of means tests (ABC, NBC) significant at the 0.10 level.

Differences in Amount of Images of War Violence: CBS, ABC and NBC⁴¹

VIETNAM	N	Mean	Std. Dev.	Min	Max
<u>Total Violence</u>					
CBS	51	7.156863	22.00579	0	125
ABC	76	6.342105	17.68129	0	90
NBC	57	4.122807	15.72994	0	110
<u>Acts of Violence</u>					
CBS	51	3.333333	11.56143	0	60
ABC	76	1.578947	5.842974	0	30
NBC	57	1.842105	11.97585	0	90
<u>Precursor Acts of Violence</u>					
CBS	51	1.372549	5.922705	0	40
ABC	76	1.118421	5.750286	0	45
NBC	57	.4385965	2.719096	0	20
<u>Injury after Violence</u>					
CBS	51	2.45098	10.55332	0	65
ABC	76	3.644737	14.31522	0	90
NBC	57	1.842105	5.87303	0	30

⁴¹ Data are measured in seconds, per story.

IRAQ		N	Mean	Std. Dev.	Min	Max
<u>Total Violence</u>						
CBS		64	16.5625	16.80597	0	75
ABC		106	17.54717	21.39476	0	120
NBC		73	20.64384	23.48426	0	110
<u>Acts of Violence</u>						
CBS	64		8.90625	10.63346	0	50
ABC	106		8.396226	16.49743	0	120
NBC	73		10.68493	14.27204	0	65
<u>Precursor Acts of Violence</u>						
CBS	64		3.359375	5.274579	0	20
ABC	106		2.358491	5.657172	0	30
NBC	73		2.945205	6.28245	0	40
<u>Injury after Violence</u>						
CBS	64		4.296875*	6.776897	0	35
ABC	106		6.792453*	10.02826	0	45
NBC		73	7.013699*	9.547386	0	40

*Differences of means test (CBS, ABC; CBS, NBC) significant at 0.10.

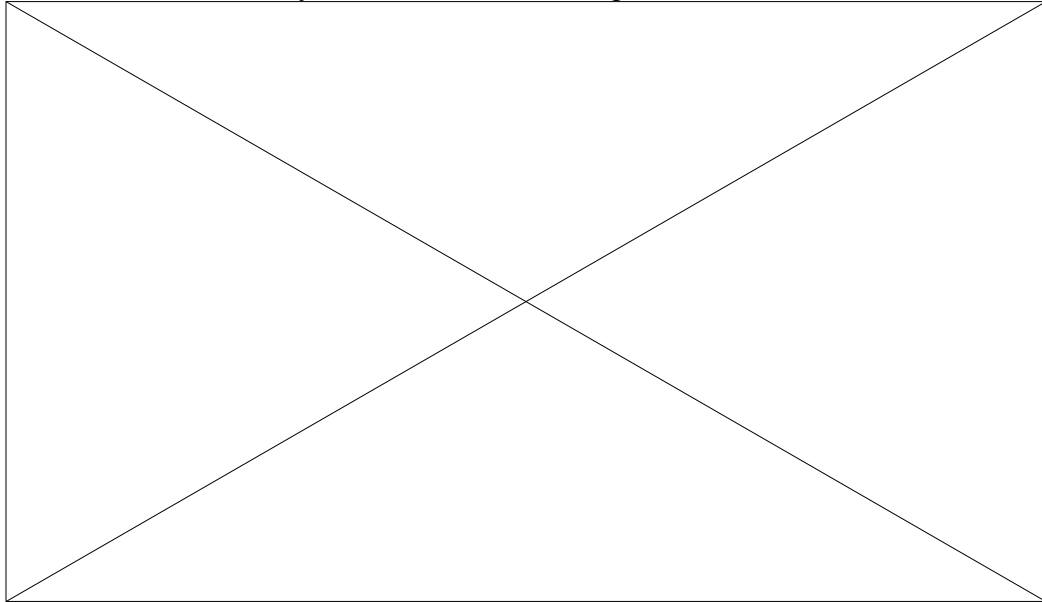
APPENDIX C

APPENDIX FOR CHAPTER V

YOUGov/POLIMETRIX QUESTIONNAIRE

Instructions (on screen): During this survey you may be asked to watch a brief video. Please verify that you are able to view this video by playing the TEST MOVIE below and answering the questions.

If you are unable to view the video, please make sure that you have the most recent version of Adobe Flash Player installed on this computer.



What did you see in the video clip?

- Space shuttle launch
- Countdown
- Soccer game
- Unable to view video

What sound did you hear while watching the video?

- Drum
- Bark
- Beep
- Unable to hear sound

<If incorrect or unable to view or hear, discontinue.>

Instructions (on screen): Thank you for your willingness to participate. This survey will ask you questions to gauge your feelings and opinions about politics. During this survey, you will read instruction pages like this one. The study consists of different types of questions. Depending upon the question type, you will use the mouse or keyboard to indicate your answer. Instructions for answering questions appear at the bottom of each question's screen, and sometimes precede the questions as well.

We would like to begin by asking you some questions about your background, your interests, and your opinions.

A1. What is your age in years?
(open-ended text)

A2. What is the highest level of education you have achieved, as of today?

- 1 Some high school
- 2 High school graduate
- 3 Associate degree
- 4 Bachelors degree
- 5 Masters degree
- 6 Ph.D. or professional degree

A3. What is your gender?

- 1 Female
- 2 Male

A4. What racial or ethnic group best describes you?

- 1 Asian
- 2 Black
- 3 Hispanic-Latino
- 4 Native American
- 5 White
- 6 Other _____

A5. Do you have children under the age of 18?

- 1 Yes
- 2 No

A6 What is your annual household income?

- 1 Under \$25,000
- 2 \$25,001 - \$40,000
- 3 \$40,001 - \$60,000
- 4 \$60,001 - \$80,000

- 5 \$80,001 - \$100,000
- 6 Over \$100,000

A7. Generally speaking, do you think of yourself as a Republican, a Democrat, an Independent, or what?

- a. Republican
- b. Democracy
- c. Independent
- d. Other

A7a.

If they select "a" or "b" to A7: Would you call yourself a strong Republican /Democrat or a not very strong Republican/Democrat?

A7b.

If they select "c" or "d" to A7: Do you think of yourself as CLOSER to the Republican Party or to the Democratic Party?

A8. We hear a lot of talk these days about liberals and conservatives. Here is a seven-point scale on which the political views that people might hold are arranged from extremely liberal to extremely conservative. Where would you place yourself on this scale, or haven't you thought much about this?

Very liberal	Liberal	Somewhat liberal	Neutral	Somewhat conservative	Conservative	Very conservative
1	2	3	4	5	6	7

I haven't thought much about this 8

How well do the following statements describe your personality?

I see myself as someone who...

- B1. ...is reserved (1-5, disagree strongly; disagree a little; neither agree nor disagree; agree a little; agree strongly)
- B2... is generally trusting
- B3. ...tends to be lazy
- B4. ...is relaxed, handles stress well
- B5. ...has few artistic interests
- B6. ...is outgoing, sociable
- B7. ...tends to find fault with others
- B8. ...does a thorough job
- B9. ...gets nervous easily
- B10. ...has an active imagination

Now we have some general questions about politics. These are questions to which not everyone knows the answers. If you do not know an answer, feel free to guess or indicate that you don't know.

C1. Which party has the most members in the Senate in Washington?

- 1 Democrats
- 2 Republican

C2. Who has the final responsibility to decide if a law is constitutional or not?

- 1 President
- 2 Congress
- 3 Supreme Court

C3. Whose responsibility is it to nominate judges to the Federal Courts?

- 1 President
- 2 Congress
- 3 Supreme Court

C4. What job is currently held by Robert Gates?

C5. What job is currently held by Harry Reid?

C6. What job is currently held by David Cameron?

C7. What job is currently held by John Roberts?

C8. What job is currently held by Nancy Pelosi?

Although there are a number of qualities that people feel that children should have, every person thinks that some are more important than others. Below we present pairs of desirable qualities. For each pair please mark which one you think is more important for a child to have:

D1. Independence or respect for elders

-
1. INDEPENDENCE
 5. RESPECT FOR ELDERS

D2. Obedience or self-reliance

-
1. OBEDIENCE
 5. SELF-RELIANCE

D3. Curiosity or good manners

-
1. CURIOSITY
 5. GOOD MANNERS

D4. Being considerate or well behaved

1. BEING CONSIDERATE
5. WELL BEHAVED

Module 1:

IMAGE EXPERIMENT

CONTROL GROUP: NO VIDEO (Skip to Questions F)

Pre-treatment briefing

Television has become the medium through which most citizens learn about politics. We'd like to show you a brief television news story that took place a few months ago. Please answer the questions after the stories to the best of your ability.

******Jennifer Anderson is currently editing the videos. Images in the videos are all taken from actual nightly network news segments. The most severe images are similar to the photos below.******

TREATMENT 1: (Nonviolent_Just video)



CHARLES GIBSON (ABC News):

This week we're going to look at the stakes of the war in Afghanistan, which President Obama has placed at the top of his foreign policy agenda. Martha Raddatz reports on where things stand.

MARTHA RADDATZ (ABC News):

Nine years later, \$210 billion spent, 1,948 international troops dead. But Afghanistan is freer. Its people more hopeful, and its government more democratic than any time since the war began. Security is improving as the US is planning to send 30,000 more troops on top of the 32,000 already here. The US refuses to neglect this war.

GENERAL MARK MILLEY

We need to improve the security situation in Afghanistan in a very real way, and we also need to improve the perception of security in the minds of the Afghan people, no question about it.

MARTHA RADDATZ (ABC News):

Even though the US has been in Afghanistan for more than 9 years, the last year was by far the most dangerous since 2001. The cloud of violence comes with a silver lining as Afghans look forward to increased human rights and a better lifestyle.

With the fight for Kandahar looming, the biggest offensive since 2001, the struggle here is expected to be intense. As US soldiers seek local support to combat rising levels of violence, US commanders look for national endorsement. Today, the US flew Afghan President Hamid Karzai to Kandahar. His mission? Convince people to back the single largest operation of the war. "I want your cooperation," he says. "You have to be brave."

He asked the Afghan people if they're with him. But many still have doubts. In the past, the US tried but failed to secure Kandahar. But today, the police and government are much better equipped. The US considered Karzai's call today a green light.

GENERAL STANLEY MCCHRYSTAL (Commander of International Forces, Afghanistan)

He looked at the people and he asked them if they were willing to sacrifice and had the strength to do this.

MARTHA RADDATZ (ABC News):

And the people came back with a strong, resounding, indication that they were. US Commanders say that the goal of the surge is to bring trust and confidence to the Afghan people through better security, and increasingly that's looking like it's having the desired effect.

And so the hard part begins. The battle for Kandahar will be bloody, but fortunately it could lead to greater democracy for all Afghan citizens. Winning Kandahar could mean winning Afghanistan. Martha Raddatz, ABC News, Kandahar.

CHARLES GIBSON:

And we'll have more on where things stand later in the week.

TREATMENT 2: (Nonviolent_Unjust video)



CHARLES GIBSON (ABC News):

This week we're going to look at the stakes of the war in Afghanistan, which President Obama has placed at the top of his foreign policy agenda. Martha Raddatz reports on where things stand.

MARTHA RADDATZ (ABC News):

Nine years later, \$210 billion spent, 1,948 international troops dead. And Afghanistan is less free. Its people less hopeful, and its government less democratic than any time since the war began. Security has deteriorated to the point where the US is planning to send 30,000 more troops on top of the 32,000 already here. The US admits it neglected this war.

GENERAL MARK MILLEY

We need to improve the security situation in Afghanistan in a very real way, and we also need to improve the perception of security in the minds of the Afghan people, no question about it.

MARTHA RADDATZ (ABC News):

Even though the US has been in Afghanistan for more than 9 years, the last year was by far the most dangerous since 2001. The cloud of violence hovers over Afghans as they see none of the promised changes in their quality of life.

With the fight for Kandahar looming, the biggest offensive since 2001, the struggle here is expected to be intense. As US soldiers seek local support to combat rising levels of violence, US commanders look for national endorsement. Today, the US flew Afghan President Hamid Karzai to Kandahar. His mission? Convince people to back the single largest operation of the war. "I want your cooperation," he says. "You have to be brave."

He asked the Afghan people if they're with him. But many still have doubts. In the past, the US tried but failed to secure Kandahar. And still today, the police and government are woefully underequipped. The US believed Karzai's call today was unlikely to affect public sentiment.

GENERAL STANLEY MCCHRYSTAL (Commander of International Forces, Afghanistan)

He looked at the people and he asked them if they were willing to sacrifice and had the, the strength to do this.

MARTHA RADDATZ (ABC News):

And the people came back with skepticism and hesitation. US Commanders say that the goal of the surge is to bring trust and confidence to the Afghan people through better security, but increasingly that's looking like it's having just the opposite effect.

And so the hard part begins. The battle for Kandahar will be bloody, but sadly it is unlikely to further democracy for all Afghan citizens. If so, losing Kandahar could mean losing Afghanistan. Martha Raddatz, ABC News, Kandahar.

CHARLES GIBSON:

And we'll have more on where things stand later in the week.

TREATMENT 3: (Violent_Just video)



CHARLES GIBSON (ABC News):

This week we're going to look at the stakes of the war in Afghanistan, which President Obama has placed at the top of his foreign policy agenda. Martha Raddatz reports on where things stand.

MARTHA RADDATZ (ABC News):

Nine years later, \$210 billion spent, 1,948 international troops dead. But Afghanistan is freer. Its people more hopeful, and its government more democratic than any time since the war began. Security is improving as the US is planning to send 30,000 more troops on top of the 32,000 already here. The US refuses to neglect this war.

GENERAL MARK MILLEY

We need to improve the security situation in Afghanistan in a very real way, and we also need to improve the perception of security in the minds of the Afghan people, no question about it.

MARTHA RADDATZ (ABC News):

Even though the US has been in Afghanistan for more than 9 years, the last year was by far the most dangerous since 2001. The cloud of violence comes with a silver lining as Afghans look forward to increased human rights and a better lifestyle.

With the fight for Kandahar looming, the biggest offensive since 2001, the struggle here is expected to be intense. As US soldiers seek local support to combat rising levels of violence, US commanders look for national endorsement. Today, the US flew Afghan President Hamid Karzai to Kandahar. His mission? Convince people to back the single largest operation of the war. “I want your cooperation,” he says. “You have to be brave.”

He asked the Afghan people if they’re with him. But many still have doubts. In the past, the US tried but failed to secure Kandahar. But today, the police and government are much better equipped. The US considered Karzai’s call today a green light.

GENERAL STANLEY MCCHRYSTAL (Commander of International Forces, Afghanistan)

He looked at the people and he asked them if they were willing to sacrifice and had the, the strength to do this.

MARTHA RADDATZ (ABC News):

And the people came back with a strong, resounding, indication that they were. US Commanders say that the goal of the surge is to bring trust and confidence to the Afghan people through better security, and increasingly that’s looking like it’s having the desired effect.

And so the hard part begins. The battle for Kandahar will be bloody, but fortunately it could lead to greater democracy for all Afghan citizens. Winning Kandahar could mean winning Afghanistan. Martha Raddatz, ABC News, Kandahar.

CHARLES GIBSON:

And we’ll have more on where things stand later in the week.

TREATMENT 4: (Violent_Unjust video)



CHARLES GIBSON (ABC News):

This week we're going to look at the stakes of the war in Afghanistan, which President Obama has placed at the top of his foreign policy agenda. Martha Raddatz reports on where things stand.

MARTHA RADDATZ (ABC News):

Nine years later, \$210 billion spent, 1,948 international troops dead. And Afghanistan is less free. Its people less hopeful, and its government less democratic than any time since the war began. Security has deteriorated to the point where the US is planning to send 30,000 more troops on top of the 32,000 already here. The US admits it neglected this war.

GENERAL MARK MILLEY

We need to improve the security situation in Afghanistan in a very real way, and we also need to improve the perception of security in the minds of the Afghan people, no question about it.

MARTHA RADDATZ (ABC News):

Even though the US has been in Afghanistan for more than 9 years, the last year was by far the most dangerous since 2001. The cloud of violence hovers over Afghans as they see none of the promised changes in their quality of life.

With the fight for Kandahar looming, the biggest offensive since 2001, the struggle here is expected to be intense. As US soldiers seek local support to combat rising levels of violence, US commanders look for national endorsement. Today, the US flew Afghan President Hamid Karzai to Kandahar. His mission? Convince people to back the single largest operation of the war. "I want your cooperation," he says. "You have to be brave."

He asked the Afghan people if they're with him. But many still have doubts. In the past, the US tried but failed to secure Kandahar. And still today, the police and government are woefully underequipped. The US believed Karzai's call today was unlikely to affect public sentiment.

GENERAL STANLEY MCCHRYSTAL (Commander of International Forces, Afghanistan)

He looked at the people and he asked them if they were willing to sacrifice and had the, the strength to do this.

MARTHA RADDATZ (ABC News):

And the people came back with skepticism and hesitation. US Commanders say that the goal of the surge is to bring trust and confidence to the Afghan people through better security, but increasingly that's looking like it's having just the opposite effect.

And so the hard part begins. The battle for Kandahar will be bloody, but sadly it is unlikely to further democracy for all Afghan citizens. If so, losing Kandahar could mean losing Afghanistan. Martha Raddatz, ABC News, Kandahar.

CHARLES GIBSON:

And we'll have more on where things stand later in the week.

E1.. How much information did you learn from the story?

1	2	3	4	5
<i>Nothing</i>	<i>Little</i>	<i>Some</i>	<i>Much</i>	<i>Very much</i>

E2. In your opinion, how important was the story to American politics?

1	2	3	4	5
<i>Not at all important</i>	<i>Not very important</i>	<i>Somewhat important</i>	<i>Important</i>	<i>Very important</i>

F. Post-stimulus:

PANAS (II)

This scale consists of a number of words that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to that word. Indicate to what extent you feel this way right now, that is, at the present moment. Use the following scale to record your answers:

1	2	3	4	5
Very slightly or not at all	A little	Moderately	Quite a bit	Extremely

Items in order:

Upset

Sad

Hostile

Happy

Surprised

Ashamed

Inspired

Angry

Nervous

Contempt

Determined

Attentive

Disgusted

Afraid

Active

Now we have some questions about issues currently in the news.

G1. Compared to the number of U.S. troops in Afghanistan now, should the number of troops in Afghanistan **three months** from now be more, less or about the same?

Much less – somewhat less – about the same – somewhat more - much more

G2. How likely do you think it is that the US will suffer an attack as serious as the ones in New York and Washington, DC sometime in the next 12 months?

Very likely – somewhat likely – somewhat unlikely – very unlikely

G3. Do you think the war in Afghanistan has caused the chance of a terrorist attack in the United States to increase, caused it to decrease, or has it had no effect on the chance of a terrorist attack in the U.S.?

- Increase [1]
- Decrease [2]
- No effect [3]

G4. If the US government were to spend more money on the U.S. military, would the chances of a terrorist attack in the United States increase, decrease, or stay the same?

G5. If the US government were to do more to stop terrorists from entering the United States, would the chances of a terrorist attack in the United States increase, decrease, or stay the same?

G6: Do you AGREE or DISAGREE with this statement: All things considered, US involvement in Afghanistan was a mistake?

Strongly agree – agree – neither – disagree – strongly disagree

G7. Do you AGREE or DISAGREE with this statement: This country would be better off if we just stayed home and did not concern ourselves with problems in other parts of the world.'

Strongly agree – agree – neither – disagree – strongly disagree

G8: Do you AGREE or DISAGREE with this statement: Collateral damage is an inevitable part of war.

Strongly agree – agree – neither – disagree – strongly disagree

G9: Do you AGREE or DISAGREE with this statement: US involvement in Afghanistan will ultimately increase the personal freedoms enjoyed by Afghans.

Strongly agree – agree – neither – disagree – strongly disagree

G10: Has the United States' use of force in the war in Afghanistan been effective?

Not effective
at all

Very effective

1	2	3	4	5	6	7
----------	----------	----------	----------	----------	----------	----------

G11. Some people think it is important to protect the nation’s security even if it means giving up some civil liberties, like having to carry a national identification card or having phone calls monitored. Others feel that we should preserve our civil liberties above all, even if it means risking the nation’s security. How about you? On a scale of 1 to 7, where a 1 indicates that we should protect the nation’s security at all costs and a 7 indicates that we should protect civil liberties at all costs, where would you place yourself?

Protect Nation’s Security at All Costs				Protect Civil Liberties at All Costs		
1	2	3	4	5	6	7

G12: Thinking back to the news story, how violent did you find the images?
 Not violent at all Very violent

1	2	3	4	5	6	7
----------	----------	----------	----------	----------	----------	----------

G13: Thinking back to the news story, did you think the news reporters showed personal opinions about whether America should be involved in the Afghanistan war?

- 1 Very biased *against* American involvement in Afghanistan
- 2 Somewhat biased *against* American involvement in Afghanistan
- 3 Balanced
- 4 Somewhat biased *in favor* of American involvement in Afghanistan
- 5 Very biased *in favor* of American involvement in Afghanistan

G14: Have you ever served in the US military?

- 1 No
- 2 Yes

G15: Do you have family or close friends who serve in Iraq or Afghanistan?

- 1 No
- 2 Yes

G15a: If they select “2” to G15, what is your relationship with the person serving who is closest to you?

- 1 Immediate family member (spouse, father, mother or sibling)
- 2 Other family member
- 3 Friend

H1. When you think about your own personal future, are you generally optimistic, pessimistic, or neither?

Very optimistic – somewhat optimistic – neither – somewhat pessimistic – very pessimistic

H2. And when you think about the future of the United State as a whole, are you generally optimistic, pessimistic, or neither?

Very optimistic – somewhat optimistic – neither – somewhat pessimistic – very pessimistic

H3: On average, how much TV do you watch a day?

- 1 I rarely watch TV
- 2 Less than 1 hour
- 3 1-2 hours
- 4 2-3 hours
- 5 3-4 hours
- 6 4-5 hours
- 7 5 hours or more

H4: What are three of your favorite television shows? (open text)

H5: Where do you go for news mostly frequently?

- 1 Newspapers
- 2 News magazines
- 3 Network TV news programs
- 4 Cable TV news programs
- 5 Online
- 6 Conversations with others
- 7 I don't often follow the news

H6: How many days in the last week did you watch news on television?

- 0
- 1
- 2
- 3
- 4
- 5
- 6
- 7

H7: How many days in the last week did you read or watch news online?

- 0
- 1

- 2
- 3
- 4
- 5
- 6
- 7

H8: How often do you play video games?

- 1 Never
- 2 Rarely
- 3 Sometimes
- 4 Often
- 5 Very often

H8a: If they answer 2, 3, 4 or 5 on H7: What types of video games do you most prefer?
(open text)

H9: On average, how often do you watch movies, either at home or at the theater?

- 1 Less than once a month
- 2 1-3 times a month
- 3 Weekly
- 4 Several times a week
- 5 Daily

H10: What types of movies do you most prefer?

- 1 Action
- 2 Adventure
- 3 Comedy
- 4 Drama
- 5 Science Fiction
- 6 Crime/War
- 7 Other

Next, I'd like to ask you questions about your remembrance of the news story about Afghanistan that you viewed earlier in the study.

I1: How many years have US forces been in Afghanistan?

1. 5
2. 7
3. 8
4. 9

5. 11

I2: How many additional troops did the story say the US was planning to send to Afghanistan?

1. 10,000
2. 15,000
3. 20,000
4. 25,000
5. 30,000

I3: Who is the President of Afghanistan?

1. Hamid Karzai
2. Mullah Omar
3. Babrak Karmal
4. Hafizulla Amid
5. Burhan Rabbani

I4: What is the name of the Afghan province where the upcoming battle will take place?

1. Nangarhar
2. Kabal
3. Kandahar
4. Samangan
5. Takhar

I5: Name one of the two US generals interviewed in the story. (open text)

I6: Name the female reporter in the story. (open text)

DEBRIEFING

Thank you very much for participating in this study. This study was interested in examining the impact of visual framing on opinions about war. If you watched a video on Afghanistan as part of this study, it was an edited compilation of television news stories. It did not air on ABC news.

If you have any questions about the content of the study, please contact Jennifer Anderson (jennifer.o.anderson@vanderbilt.edu). She will be happy to answer your questions. Thanks again for participating in the study!

References

- Althaus, Scott L. 2007. "Free falls, high dives, and the future of democratic accountability." In *The politics of news*, edited by D. A. Graber, D. McQuail and P. Norris. Washington, D.C.: CQ Press.
- Althaus, Scott, and Kevin Coe. 2008. "Priming patriots: How news intensity and evaluative tone affect public support for war." Paper presented at the "Conference on Homogeneity and Heterogeneity in Public Opinion" at Cornell University, Ithaca NY, October 3-5. Earlier version presented at the 2007 Annual Meeting of the International Communication Association, San Francisco CA, May 24-28.
- [Althaus, Scott, and Kevin Coe. 2011. "Priming patriots: Social identity processes and the dynamics of public support for war." *Public Opinion Quarterly*. 75\(1\): 65-88.](#)
- Anderson, C. A., Shibuya, A., Ihori, N., Swing, E. L., Bushman, B.J., Sakamoto, A., Rothstein, H.R., & Saleem, M. 2010. "Violent video game effects on aggression, empathy, and prosocial behavior in Eastern and Western countries." *Psychological Bulletin* 136: 151-173.
- Barry, Ann Marie. 2005. "Perception theory." In *Handbook of visual communication*, ed. Ken Smith, Sandra Moriarty, Gretchen Barbatsis, and Keith Kenney, pp. 45-62. Mahwah, NJ: Lawrence Erlbaum.
- Bauder, David. 2009. "Fox News #1 Again." Associated Press (March 27, 2009).
- Baum, Matthew A. 2002. "The constituent foundations of the rally-round-the-flag phenomenon." *International Studies Quarterly* 46 (2):263-298.
- Baum, Matthew A. 2003. *Soft news goes to war: Public opinion and American foreign policy in the new media age*. Princeton, NJ: Princeton University Press.
- Baum, Matthew A. and Tim Groeling. 2005. "What gets covered? How media coverage of elite debate drives the rally-'round-the-flag phenomenon: 1979-1998." In *In the public domain: Presidents and the challenges of public leadership*, edited by L. C. Han and D. J. Heith. Albany, NY: State University of New York Press.
- Benjamin, Daniel J. and Jesse M. Shapiro. 2008. "Thin-slice forecasts of gubernatorial elections." *Review of Economics and Statistics* 90 (3): 523-536.
- Bennett, W. Lance and Robert M. Entman, eds. 2001. *Mediated politics: Communication in the future of democracy*. Cambridge, UK: Cambridge University Press.
- Benton, M. and P. J. Frazier. 1976. "The agenda setting function of the mass media at three levels of "information holding." *Communication Research* 3 (3): 261-274.

- Berkinsky, Adam J. 2007. "Assuming the costs of war: Events, elites, and American public support for military conflict." *Journal of Politics* 69 (4): 978-97.
- Berinsky, Adam and Jamie Druckman. 2007. "Public opinion research and support for the Iraq War." *Public Opinion Quarterly* 71 (1): 126-141.
- Boettcher, William A., III, and Michael D. Cobb. 2006. "Echoes of Vietnam? Casualty framing and public perceptions of success and failure in Iraq." *Journal of Conflict Resolution* 50 (6): 831-854.
- Brader, T. 2006. *Campaigning for hearts and minds: How emotional appeals in political ads work*. Chicago: The University of Chicago Press.
- Briggs, Asa and Peter Burke. 2005. *A social history of the media: From Gutenberg to the internet*. Malden, MA: Polity Press.
- Brody, Richard A. 1991. *Assessing the president: The media, elite opinion, and public support*. Stanford, CA: Stanford University Press.
- Bucy, Erik P. 2000. "Emotional and evaluative consequences of inappropriate leader displays." *Communication Research*, 27(2), 194-226.
- Bucy, Erik P. and JE Newhagen. 1999. "The emotional appropriateness heuristic: Processing televised presidential reactions to the news." *Journal of Communication* 49 (4): 59-79.
- Bueno de Mesquita, Bruce, Alastair Smith, Randolph Siverson, and James Morrow. 2003. *The Logic of Political Survival*. Cambridge, MA: MIT Press.
- Burk, James. 1999. "Public support for peacekeeping in Lebanon and Somalia: Assessing the casualties hypothesis." *Political Science Quarterly* 114 (1): 53-78.
- Bushman, BJ and RG Geen. 1990. "Role of cognitive emotional mediators and individual differences in the effects of media violence on aggression." *Journal of Personality and Social Psychology* 58 (1): 156-163.
- Carson, Jamie, Jeffrey Jenkins, David Rohde, and Mark Souva. 2001. "The impact of national tides and district-level effects on electoral outcomes: The U.S. Congressional elections of 1862-1863." *American Journal of Political Science* 45 (4): 887-98.
- Cerulo, Karen A. 1998. *Deciphering Violence: The cognitive structure of right and wrong*. New York, New York: Routledge.
- Cohen, Jacob. 1992. "A power primer." *Psychological Bulletin* 112(1): 155-159.

- Coleman, Renita and Stephen A. Banning. 2006. "Network TV news' affective framing of the presidential candidates: Evidence for a second-level agenda-setting effect through visual framing." *Journalism & Mass Communication Quarterly* 83(2): 313-328.
- Damasio, Antonio R. 1999. *The feelings of what happens*. New York: Harcourt Brace.
- Druckman, Jamie. 2001. "On the limits of framing effects: Who can frame?" *The Journal of Politics* 63 (4): 1041-1066.
- Druckman, Jamie. 2003. "The power of television images: The first Kennedy-Nixon debate revisited." *The Journal of Politics* 65 (3): 559-571.
- Druckman, Jamie and Justin W. Holmes. 2004. "Does Presidential rhetoric matter?: Priming and presidential approval." *Presidential Studies Quarterly* 34 (4): 755-778.
- Eichenberg, Richard C. 2005. "Victory has many friends: U.S. public opinion and the use of military force, 1981-2005." *International Security* 30 (1):140-177.
- Entman, Robert. 1993. "Framing: toward clarification of a fractured paradigm." *Journal of Communication* 43 (4): 51-58.
- Fan, DP. 1993. "Media coverage and US public opinion on the Persian Gulf." In BS Greenberg & W. Gantz , Eds., *Desert Storm and the mass media* (pp. 125-142). Cresskill, NJ: Hampton.
- Feaver, Peter D., and Christopher Gelpi. 2004. *Choosing your battles: American civil-military relations and the use of force*. Princeton, NJ: Princeton University Press.
- Gadarian, Shana Kushner. 2007. "The fire next time: How terrorism news shapes foreign policy attitudes." Presented at the 2007 annual meeting of the American Political Science Association. Chicago, IL.
- Gans, Herbert J. 2004. *Deciding what's news: A study of CBC Evening News, NBC Nightly News, Newsweek and Time*. Evanston, IL: Northwestern University Press.
- Gartner, Scott Sigmund. 2008. "The multiple effects of casualties on public support for war: An experimental approach." *American Political Science Review* 102 (1): 95-106.
- Gartner, Scott Sigmund and Gary M. Segura. 1998. "War, casualties and public opinion." *The Journal of Conflict Resolution* 42 (3): 278-300.
- Gartner, Scott Sigmund and Gary M. Segura. 2000. "Race, opinion and casualties in the Vietnam War." *The Journal of Politics* 62 (1): 115-146.

- Gartner, Scott Sigmund, Gary M. Segura and Bethany Barratt. 2004. "Casualties, positions and Senate elections in the Vietnam War." *Political Research Quarterly* 53 (3): 476-77.
- Gartner, Scott Sigmund, Gary M. Segura, and Michael Wilkening. 1997. "All politics are local: Local losses and individual attitudes toward the Vietnam War." *Journal of Conflict Resolution* 41 (5): 669-694.
- Gelpi, Christopher, Peter D. Feaver, and Jason Reifler. 2005. "Success matters: Casualty sensitivity and the war in Iraq." *International Security* 30 (3):7-46.
- Gleitman, Henry, Daniel Reisberg, and James Gross. 2007. *Psychology*. 7th ed. New York: W.W. Norton.
- Gordon, S.B. and Segura G.M. 1997. "Cross-National Variation in the Political Sophistication of Individuals: Capability or Choice?" *Journal of Politics* 59 (1): 126-147.
- Grabe, Maria Elizabeth and Erik Page Bucy. 2009. *Image Bite Politics: News and the Visual Framing of Elections*. Oxford, United Kingdom: Oxford University Press.
- Grabe, M. E. & Kamhawi, R. 2004. "Cognitive access to new and traditional media: Evidence from different strata of the social order." In E. P. Bucy and J. Newhagen (Eds.), *Media Access: Social & Psychological Dimensions of New Technology Use* (pp. 27-46). Mahwah, NJ: Lawrence Erlbaum Associates.
- Grabe, Maria Elizabeth, Rasha Kamhawi, and Narine Yeghayan. 2009. "Informing citizens: How people with different levels of education process television, newspapers, and Web news." *Journal of Broadcasting & Electronic Media* 53 (1): 90-111.
- Grabe, Maria Elizabeth, Narine Yeghayan, and Rasha Kamhawi (in press). "Experimental evidence of the knowledge gap: Message arousal, motivation, and time delay." *Human Communication Research*.
- Graber, Doris A. 1990. "Seeing is remembering: How visuals contribute to learning from television news." *Journal of Communication* 40 (3): 134-155.
- Graber, Doris A. 1988. *Processing the news: How people tame the information tide*, 2nd ed. New York: Longman.
- Graber, Doris A. 2001. *Processing politics: Learning from television in the Internet age*. Chicago: University of Chicago Press.
- Graber, Doris A. 2004. "Methodological developments in political communication research." In Lynda Lee Kaid (Ed.), *Handbook of political communication research* (pp. 45-67). Mahwah, NJ: Lawrence Erlbaum Associates.

- Grose, Christian R. and Bruce I Oppenheimer. 2007. "The Iraq War, partisanship, and candidate attributes: Variation in partisan swing in the 2006 U.S. House elections." *Legislative Studies Quarterly* 32 (4): 531-557.
- Groseclose, Tim and Jeff Milyo. 2005. "A measure of media bias." *The Quarterly Journal of Economics* 120 (4): 1191-1237.
- Gunter, Barrie. 1985. *Dimensions of television violence*. New York: St. Martin's.
- Gunter, Barrie and Jackie Harrison. 1998. *Violence on television: an analysis of amount, nature, location, and origin of violence in British programmes*. New York: Routledge.
- Gunter, Barrie, Jackie Harrison and Maggie Wykes. 2003. *Violence on television: Distribution, form, context, and themes*. New York: Routledge.
- Hallen, Daniel C. 1992. "Sound bite news: Television coverage of elections, 1968–1988." *Journal of Communication* 42 (2): 5-24.
- Haninger, Kevin, M. Seamus Ryan, and Kimberly M. Thompson. 2004. "Violence in teen rated video games." *Medscape General Medicine* 6(1).
- Harvey, Mary R. and P. Tummala-Narra (Eds.) 2007. "Sources and expressions of resilience in trauma survivors: Ecological theory, multicultural practice." *Journal of Aggression, Maltreatment and Trauma*: 14(1): 89-99.
- Hetherington, Marc J. and M. Nelson. 2003. "Anatomy of a rally effect: George W. Bush and the war on terrorism." *PS: Political Science and Politics* 36 (1): 37-42.
- Herrmann, Richard K., Philip E. Tetlock, and Penny S. Visser. 1999. "Mass public decisions to go to war: A cognitive-interactionist framework." *American Political Science Review* 93(3): 553-573.
- Honderich, Ted. 1976. *Political Violence*. Ithaca, New York: Cornell University Press.
- Huddy, L., S. Feldman, G. Lahav, and C. Taber. 2003. "Fear and terrorism: Psychological reactions to 9/11." In *Framing terrorism: The news media, the government, and the public*. P. Norris, M. Kern, M. Just (eds.). New York: Routledge.
- Huesmann, L. Rowell and Laramie D. Taylor. 2006. "The role of media violence in violent behavior." *Annual Review of Public Health* 27: 393-415.
- Iowa State University. 2006. "Psychologists produce first study on violence desensitization from video games." Press release, July 27, 2006.
- Iyengar, Shanto. 1987. "Television news and citizen's explanations of national affairs." *The American Political Science Review* 81 (3): 815-832.

- Iyengar, Shanto. 1991. *Is anyone responsible?: How television frames political issues*. Chicago, IL: University of Chicago Press.
- Iyengar, Shanto and Donald Kinder. 1987. *News that matters: Television and American opinion*. Chicago, IL: University of Chicago Press.
- Iyengar, Shanto and Adam Simon. 1994. "News coverage of the gulf crisis and public opinion: A study of agenda setting, priming and framing." In *Taken by Storm: The media, public opinion, and U.S foreign policy in the Gulf War*. eds. W. Lance Bennett, and David L. Paletz, 167-85. Chicago, IL: University of Chicago Press.
- Jentleson, Bruce W. 1992. "The pretty prudent public: Post post-Vietnam American opinion on the use of military force." *International Studies Quarterly* 36 (1):49-73.
- Jentleson, Bruce W., and Rebecca L. Britton. 1998. "Still pretty prudent: Post-Cold War American public opinion on the use of military force." *Journal of Conflict Resolution* 42 (4): 395-417.
- Johnson, Peter. 2004. "Will Fox News' success force competitors to take sides?" *USA Today* (November 21, 2004).
- Johnson, Dominic D. P., and Dominic Tierney. 2006. *Failing to win: Perceptions of victory and defeat in international politics*. Cambridge, MA: Harvard University Press.
- Kam, Cindy D. 2005. "Who toes the party line? Cues, values, and individual differences." *Political Behavior* 27(2): 163-182.
- Kam, Cindy D. and Donald R. Kinder. 2007. "Terror and ethnocentrism: Foundations of American support for the War on Terrorism." *Journal of Politics* 69 (2):320-338.
- Karol, David and Edward Miguel. 2007. "Iraq War casualties and the 2004 U.S. presidential election." *Journal of Politics* 69 (3): 633-48.
- Kellner, Douglas. 2004. "Media propaganda and spectacle in the war on Iraq: A critique of US broadcasting networks." *Cultural studies critical methodologies* 4 (3): 329-338.
- Kepplinger, Hans Mathias. 1991. "The impact of presentation techniques: Theoretical aspects and empirical findings." In Frank Biocca (Ed.), *Television and political advertising, vol. 1: Psychological processes* (pp. 173-194). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Kinder, Donald R. and Thomas R. Palfrey, eds. 1993. *Experimental foundations of political science*. Ann Arbor, MI: University of Michigan Press.

- Klarevas, L. 2002. "The 'essential domino' of military operations: American public opinion and the use of force." *International Studies Perspectives* 3 (4): 417-37.
- Kull, Steven, and Clay Ramsay. 2001. "The myth of the reactive public: American public attitudes on military fatalities in the post-Cold War period." In P. Everts and P. Isernia (eds.), *Public opinion and the international use of force*. New York: Routledge.
- Kurtz, Howard. 2004. "Fewer Republicans trust the news, survey finds." *Washington Post* (June 9, 2004), C01.
- Lanzetta, John T., Denis G. Sullivan, Roger D. Masters, and Gregory J. McHugo. 1985. "Emotional and cognitive responses to televised images of political leaders." In Sidney Kraus and Richard M. Perloff (Eds.), *Mass media and political thought: An information-processing approach* (pp. 85-116). Beverly Hills, CA: Sage.
- Larson, Eric V. 1996. *Casualties and consensus: The historical role of casualties in domestic support for U.S. military operations*. Santa Monica, CA: Rand.
- Larson, Eric V. 2005. *American public support for U.S. military operations from Mogadishu to Baghdad*. Santa Monica, CA: Rand.
- LeDoux, Joseph. 1996. *The emotional brain: The mysterious underpinnings of emotional life*. New York: Simon and Schuster.
- Lesy, Michael. 2007. "Visual literacy." *Journal of American History* 94 (1): 143-153.
- Liang, Belle, Lisa Goodman, Pratyusha Tummala-Narra and Sarah Weintraub. 2005. "A theoretical framework for understanding help-seeking processes among survivors of intimate partner violence." *American Journal of Community Psychology* 36 (1-2): 71-86.
- Liang, B., Tummala-Narra, P., Bradley, R. and Harvey, M.R. 2007. "The multidimensional Trauma Recovery and Resiliency Instrument: Preliminary examination of an abridged version." *Journal of Aggression, Maltreatment and Trauma* 14 (1): 55-74.
- Libet, Benjamin, Dennis K. Pearl, David Morledge, Curtis A. Gleason, Yoshio Morledge and Nicholas Barbaro. 1991. "Control of the transition from sensory detection to sensory awareness in man by the duration of a thalamic stimulus." *Brain* 114: 1731-1757.
- Masters, Roger D. 1989. *The nature of politics*. New Haven: Yale University Press.
- Masters, Roger D., Dennis G. Sullivan, John T. Lanzetta, Gregory J. McHugo, and Basil G. Englis (1986). "Facial displays and political leadership." *Journal of Biological and Social Structures* 9 (2): 319-343.

- McChesney, Robert W. 2004. *The problem of the media: U.S. communication politics in the twenty-first century*. New York: Monthly Review Press.
- Mueller, John E. 1973. *War, presidents, and public opinion*. New York: John Wiley & Sons.
- Mueller, John E. 1994. *Policy and opinion in the Gulf War*. In B. I. Page (ed.), *American politics and political economy series*. Chicago: University of Chicago Press.
- Mutz, Diana C. 2007. "Effects of "in-your-face" television discourse on perceptions of a legitimate opposition." *American Political Science Review* 101 (4): 621-635.
- Nelson, Thomas E., Rosalee A. Clawson, and Zoe M. Oxley. 1997. "Media framing of a civil liberties conflict and its effect on tolerance." *American Political Science Review* 91 (3): 567-583.
- Neuman, W. Russell, Marion Just, and Ann N. Crigler. 1992. *Common knowledge: News and the construction of political meaning*. Chicago: University of Chicago Press.
- Newell, Allen. 1990. *Unified theories of cognition*. Cambridge, MA: Harvard University Press.
- Newhagen, John E. 2002. "The role of meaning construction in the process of persuasion for viewers of television images." In James P. Dillard and Michael W. Pfau (Eds.), *The persuasion handbook: Developments in theory and practice* (pp. 729-748). Thousand Oaks, CA: Sage.
- Newhagen, John E. and Byron Reeves. 1992. "The evening's bad news: Effects of compelling negative television." *Journal of Communication* 42 (2): 25-41.
- Nincic, Miroslav and Donna Nincic. 2002. "Race, gender and war." *Journal of Peace Research* 39 (5): 547-568.
- Parker, Andrew. 2003. *In the blink of an eye: How vision sparked the big bang of evolution*. New York: Perseus.
- Parker, Suzanne L. 1995. "Toward an understanding of "rally" effects: Public opinion in the Persian Gulf War." *Public Opinion Quarterly* 59 (3): 526-546.
- Peffley, M. and J. Hurwitz. 1993. "Models of attitude constraint in foreign affairs." *Political Behavior* 15(1): 61-90.
- Potter, W. James. 2008. *Media literacy*. Los Angeles, CA: Sage

- Price, Vincent, and John Zaller. 1993. "Who gets the news? Alternative measures of news reception and their implications for research." *Public Opinion Quarterly* 57 (2): 133-164.
- Prior, Markus. 2003. "Any good news in soft news? The impact of soft news preference on political knowledge." *Political Communication* 20 (1): 149-171.
- Prior, Markus. 2005. "News versus entertainment: How increasing media choice widens gaps in political knowledge and turnout." *American Journal of Political Science* 49 (3): 577-592.
- Prior, Markus. 2008. "The incredibly inflated news audience: Assessing bias in self-reported news exposure." Working paper.
- Rawls, John. 1971. *A theory of justice*. Cambridge, Massachusetts: Harvard University Press.
- Reeves, Byron, and Clifford Nass. 1996. *The media equation: How people treat computers, television, and new media like real people and places*. New York: Cambridge University Press.
- Robinson, M. and M. Sheehan. 1983. *Over the wire and on TV*. New York, New York: Russell Sage Foundation.
- Robinson, M. and M. Clancey. 1985. "Teflon politics." *Public Opinion* 17 (1): 14-18.
- Russett, Bruce, and Miroslav Nincic. 1976. "American opinion on the use of military force abroad." *Political Science Quarterly* 91 (3):411-431.
- Sears, D. 1993. "Symbolic politics: A socio-political theory." In S. Iyengar and W. McGuire (Eds.), *Explorations in political psychology*. (pp. 113-148.) Durham, NC: Duke University Press.
- Shapiro, Robert Y., and Harpreet Mahajan. 1986. "Gender differences in policy preferences: A summary of trends from the 1960s to the 1980s." *Public Opinion Quarterly* 50 (1):42-61.
- Sigelman, Lee, James Lebovic, Clyde Wilcox, and Dee Allsop. 1993. "As time goes by: Daily opinion change during the Persian Gulf crisis." *Political Communication* 10 (2): 353-367.
- Smith, Stacy L. Ken Lachlan and Ron Tamborini. 2003. "Popular video games: quantifying the presentation of violence and its context." *Journal of Broadcasting & Electronic Media* 47 (1): 58-76.

Sullivan, Dennis G. and Roger D. Masters. 1988. "Happy warriors": Leaders' facial displays, viewers' emotions, and political support. *American Journal of Political Science*, 32(2): 345-368.

Todorov, Alexander, Anesu N. Mandisodza, Amir Goren, and Crystal C. Hall. 2005. "Inferences of competence from faces predict election outcomes." *Science*, 308 (10): 1623-1626.

Turner, Joel. 2007. "The messenger overwhelming the message: Ideological cues and perceptions of bias in television news." *Political Behavior* 29 (4): 441-464.

Verba, Sidney, Richard A. Brody, Edwin B. Parker, Norman H. Nie, Nelson W. Polsby, Paul Ekman and Gordon S. Black. 1967. "Public opinion and the war in Vietnam." *American Political Science Review* 61 (2): 317-333.

Volgy, Thomas J. and John E. Schwarz. 1980. "On television viewing and citizens' political attitudes, activity and knowledge: Another look at the impact of media on politics." *The Western Political Quarterly* 33 (2): 153-166.

Voeten, Erik, and Paul R. Brewer. 2006. "Public opinion, the war in Iraq and presidential accountability." *The Journal of Conflict Resolution* 50 (6): 809-30.

Wilcox, Clyde, Lara Hewitt, and Dee Allsop. 1996. "The gender gap in attitudes toward the Gulf War: A cross-national perspective." *Journal of Peace Research* 33 (1): 67-82.

Wilson, Barbara J, Dale Kunkel, Dan Linz, James Patter, Ed Donnerstein, Stacy L. Smith, Eva Blumenthal and Timothy Gray. 1997. "Violence in television programming overall: University of California, Santa Barbara study." In *National Television Study of Violence, Volume 1*. London, England: Sage Publications.

Wolff, Robert Paul. 1969. "On violence." *Journal of Philosophy* 66 (3): 601-16.

Wright, Brad. 2004. "Sounding the alarm on video game ratings." *CNN News* (February 18, 2004). http://articles.cnn.com/2002-12-19/tech/games.ratings_1_game-industry-violent-games-entertainment-software-ratings-board?_s=PM:TECH. Accessed October 10, 2009.

Zaller, John R. 1992. *The nature and origins of mass opinion*. New York: Cambridge University Press.

Zaller, John R. 1993. "The Converse-McGuire model of attitude change and the Gulf War opinion rally." *Political Communication* 10 (4):369-388.

Zaller, John R. 1994. "Elite leadership of mass opinion: New evidence from the Gulf War." In W. L. Bennett and D. L. Paletz (eds), *Taken by storm: The media, public opinion, and U.S. foreign policy in the Gulf War*. Chicago: University of Chicago Press.

Zaller, John and Dennis Chiu. 1996. "Government's little helper: Press coverage of foreign policy crises, 1945-1991." *Political Communication* 13 (4): 385-406. Revised and reprinted as "Government's little helper: Press coverage of foreign policy crises, 1945-1999," in *Foreign Policy-making in a Glass House*, (ed.) Robert Y. Shapiro, Routledge, 2000.

Zimmerman, Manfred. 1989. "The nervous system in the context of information theory." In Robert F. Schmidt and Gerhard Thews (eds.), *Human physiology*, 2nd ed. (pp. 166-173). Berlin, Germany: Springer-Verlag.