Hurricane Katrina Exposed: Media Framing of an American Catastrophe

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[*This paper examines the complex implications of agenda setting and framing of particular issues by the media. A detailed study was conducted using word frequencies for articles in The New York Times and Wall Street Journal to examine how Hurricane Katrina was framed by the media during a four week period following the storm. The findings show that the message an audience receives depends on the source they receive it from, which has significant implications regarding the two sources chosen, and that even within a source there is a shift in frames over time*.]

Introduction

Media plays a dominant role in American society today. Due to the rise in the number of media outlets, an increase in various types of media sources, as well as the convenience with which these sources provide the public with access to a large and diverse amount of information, scholars have debated what political effects media has, if any. More specifically, debate has raged for years as to whether the media has agenda setting and/or priming capabilities; if so, to what extent does it exist; what is the order of the relationship; do different types of media have different effects; and does media influence individual people differently? I argue that media does in fact have an effect on the level of importance an individual assigns to particular issues, as well as how they evaluate those issues. This paper will examine the implications of such agenda setting through a study of media framing surrounding Hurricane Katrina. To accomplish this task, I offer a background on previous research done regarding the media, followed by information of Hurricane Katrina's relationship with the media. I then conduct a study using articles from the New York Times and Wall Street Journal that framed Hurricane Katrina. The results illustrate the importance framing has by showing that the message an audience receives depends on the source they receive it from and that even within the same source, the same issue can be shaped differently over time.

Prior Media Research

In their article, "Experimental Demonstrations of the 'Not-So-Minimal' Consequences of Television News Programs" (1962) Iyengar, Peters and Kinder seek to disprove the results of prior studies that have found media to have minimal or no effect on agenda setting and priming the public. Such research found that people were virtually impervious to political persuasion by the media, thus establishing what is referred to as "minimal effects" of the media. Iyengar, Peters and Kinder countered this assertion by testing Lippmann's (1922) contention that the issues

decided by the media to be important also become important in the minds of the public. These scholars determined that the best way to provide support for Lippmann's argument is through experimental research.

The experiment conducted was based on a questionnaire submitted to participants prior to and after the experiment. The experiment was comprised of sample groups who were shown different newscasts, for four days, which had been altered with emphasis to one issue. Those issues with more time devoted to them in the newscast throughout the week were rated by the respondents as having higher importance at the end of the experiment than at the beginning. This outcome strongly suggests that media has the ability to set an agenda. They also found that respondent answers regarding the evaluation of presidents changed after the experiment as well, implying that media also has the ability to prime public opinion. The outcomes showed media to have the strongest effect on those who were less politically informed, suggesting that the well informed were less vulnerable to the effects of the media to alter their agenda than were their uninformed counterparts. These two major findings regarding media agenda setting and priming have had important implications for later research.

Another important aspect of this research worth mentioning is that through controls, Iyengar, Peters, and Kinder were also able to demonstrate that both effects were not temporary by showing that the results lasted for longer than twenty-four hours after the news program was watched. The results were also shown to be more than purely a recall strategy by the public. The recall theory states that people retain more information of the problems covered more explicitly in the news and by doing so conclude these issues are more significant based on the knowledge they have of them. They also show their findings to be consistent with the covert evaluation hypothesis, in which agenda setting has stronger effects on those who fail to counter-argue what

is being presented to them; i.e., those whose political knowledge is minimal. The well informed, by contrast, resist agenda setting.

In 1984, Michael MacKuen gave further support to the relationship posed by Iyengar, Peters and Kinder, by studying citizen responsiveness to media messages about the political agenda. MacKuen cites important research done by scholars (Cobb & Elder, 1972; Crenson, 1971; Dahl, 1966; Davis, Hinich & Ordeshook, 1970; Downs, 1957) that examines the importance political agenda has on determining democratic outcomes. The idea of the media possessing the ability to alter an agenda has powerful implications for democracy, considering the substantial impact that the political agenda has on such outcomes. MacKuen argues that the problem regarding previous research on media effects, even the ones in support of the theory, is that they are based on a simple dynamic model. Consequently, such studies only focus on one part of the explanation. MacKuen states that the findings that arise from such work are then not as thorough as they should and can be. He goes into detail about the methods used by Iyengar, Peters and Kinder and suggests that their research is not perfect and their results may not be entirely accurate. He argues this is because the method was experimental, and therefore controlled the conditions on which the results were found. However, MacKuen does give credit to their findings for functioning as a guide to further research, which should be done through the use of a more accurate, two-component model.

MacKuen asserts that education, personal motivation, exposure, and participation in social activity can offer a more thorough explanation of the question of media having an effect on public opinion. Through examining the responsiveness of the public in relation to what he labels as exposure and integration, as well as exposure and integration in relation to skill and motivation, MacKuen's findings are the opposite of those presented by Iyengar et al. in regards to who the media has the strongest influence on. Contrary to their findings, he discovers that the

agendas of the better educated are more responsive to the media's messages than are those of their less educated/ less informed counterparts (the results showed double the value for those with a college education versus those with only a grade school education). Likewise, a greater instability is demonstrated for media persuasion among more involved politically engaged individuals than for anyone else in his model. MacKuen's results illustrate these outcomes well, stating that if the media agenda could be controlled by a single person for a period of two months, then they could change the agenda of 26% of the poorly educated/less interested members of the public and 55% of the highly involved/educated, and for 6 months the percents would be 60% and 91%.Yet, no correlations between social interaction and media impact were found to be significant. These results may agree with Iyengar's work to the extent that media have the power to influence the agenda of the public, but they changed the idea of what segments of the population are considered to be the most affected by these changes.

Media effects research was shifted again by Page, Shapiro and Dempsy (1987), through an examination of whether different news sources would have different consequences for public opinion. The authors state that researching what drives public opinion is crucial for democratic theory because it is the public who determine what the government does. They cite a great deal of work which has contributed to showing that public opinion has contiguous effects on policy making in the U.S., and that policies are judged by citizens based on individual perception of the costs and benefits for themselves, their friends, families, favored groups, and the nation/world as a whole. Page, Shapiro and Dempsy take into account that the public is not aware of how policies will turn out and therefore judge each individual policy based on the current "state of nature". State of nature refers to casual relationships and beliefs about current and future facts (see McCubbins and Page, 1984).

The media ties into all of this because most people gain their information regarding such policies through the media, who Page et al. claim; work hard to make sure their stories are simplified, interesting, and visually strong in order to have the greatest impact possible on the public. In the article, the minimal effects literature is again refuted and discredited, by stating that the lack of findings in such research are due to the exclusion of collective opinion over a considerable period of time in natural settings. In contrast, the work by both Iyengar et al. and MacKuen is among a list of others cited in order to offer reliability to the assertions of the importance of media on shaping the public agenda.

Page, Shapiro, and Dempsy, in their contribution to this body of work, aim to prove that individuals will differ in the sources they feel are credible and salient. Their results showed that short and medium term opinion changes in TV news variables accounted for over 90 percent of the variance in public opinion at the time of the second survey. They also showed that the news variables accounted for about half of the variance in opinion change alone. Commentary news impact was strongest, but expert testimonials and news from or about popular presidents was also very credible. Meanwhile, news sources that were not credible or those from interest groups, had negative or no impact. This finding is important to the literature because it can lead to further examination of different types of news sources. It also provides an interesting avenue for research into how credibility relates to biased sources today, for which little or no work seems to exist.

These two articles, as well as an explicit amount of the previous work on the subject highlights the media's effect in terms of being able to tell people what issues to think *about*, but not how effective or ineffective the media is at telling people *what* to think about these issues. This phenomenon is discussed in great detail by Robert Entman (1989) in his article, "How the Media Affect What People Think". He states that the work done by Iyengar, Peters and Kinder;

MacKuen; and Page, Shapiro, and Dempsy was "pioneering yet disparate work" that was only able to show that media influences the agenda, but does not develop any theory to contest a notion of "audience autonomy." The idea of audience autonomy is based on the principle that the public forms their opinions independently from the media. In his article, Entman intends to account for audience autonomy ignored by others, and show that because media is able to shape what people think about, it can also have considerable impact on what the public thinks about these issues.

Entman refers to MacKuen's article several times as an example of the agenda setting ability of the media that has little regard for how the public then evaluates these issues being placed on their agendas by the media. However, Entman's results are in line with those of MacKuen in the sense that those with only moderate political attention/ interest are not influenced as much by media as those who are strongly liberal or strongly conservative. Yet, it differs by stating that attitudes are influenced more by those issues receiving media attention that the public is unfamiliar with than by those issues the public is familiar with. Entman makes the assertion that an equal amount of support in his research exists for the content within a newspaper to shape the attitudes of the public, as well as for the idea that audiences are likely to select newspapers that they agree with, also referred to as selective exposure. Therefore, Entman makes a suggestion that scholars should alter the media relationship statement to read, "The media do not control what people prefer; they influence public opinion by providing much of the information people think about and by shaping how they think about it" (Entman 1989, 361).

Larry M. Bartels (1993) has his own critiques on the development of literature regarding media effects. He makes a strong accusation that such literature is, "one of the most notable embarrassments of modern social science" (Bartels 1993, 267). He states that it is possible that such research regarding media exposure may be partial in ways that allow the results to produce

false correlations with public opinions, especially those which refer to specific issues or political candidates. Bartels observes the literature done by Iyengar et al. as being some of the most convincing because it was done in a controlled environment. Yet, he also states that such experiments give little in the way of external validity. Bartels' intentions are to more plainly demonstrate why unidirectional media exposure effects do not emerge more often than they do, and why they occur more frequently than has been confirmed in previous literature.

Bartels suggests the findings of his research on presidential campaigns have important implications for studies regarding media effects. His evidence shows that those messages put forth by the media that are "consistent and distinctive" and favor one side or another are likely to produce substantial opinion changes over time. Thus, he contends that such work should include when and why consistent, distinctive media messages are produced. Bartels also claims that future research would benefit from the following: an examination of the impacts both indirect and direct media exposure have; distinguishing between different types of media on a more specific basis, such as newspapers, news programs on television, debates, campaigns, etc.; and from scholars being more cautious in the analysis of their results.

The shift of media research to include a consideration of the influence that presidential media possesses did not stop with Bartels. In fact, a significant piece in the debate comes after his work, by Jeffery Cohen in 1995. His research focuses on State of the Union Addresses as a measure of the amount of attention given to policy areas, looking at attention to economic, foreign, and civil rights policies in particular. He does so by using the Gallup Poll's Most-Important Problem Series, from 1953 to 1989. As a result, he concludes that these areas are the ones that the public becomes most concerned with. His findings also show that the popularity of a president does not change how influential they are at altering public opinion. Cohen references the aforementioned work by Page, Shapiro and Dempsy, and the attempts they made to explain

how the president is able to lead public opinion on specific policies. He also addresses their claims about the popularity of presidents weighing into their ability to persuade public opinion. Cohen states their contribution as providing strong evidence that the president has the ability to influence the public agenda. Cohen also states that the president can secure his own success with Congress by being able to set their agenda. The president is able to do so through promoting the issues he favors, and that he knows Congress is likely to pass, as well as by relegating other issues. Cohen states that this is further beneficial because by being successful in Congress, the president's own popularity is also boosted. Cohen's success in his results led other scholars not only to continue to focus on the president's impact on the agenda setting and media relationship, but also to consider Congress' place in the relationship as well.

This contribution is most obvious in the work titled, "Who Influences Whom? The President, Congress and the Media," by George Edwards and B.D. Wood (1999). Edwards and Wood first mention the reason why work regarding the policy agenda is so important is because scholars have shown for decades that it is an essential component of political power. The article states the relationship built on these concepts follows a path: the president sets the agenda, the media focuses on it, this leads to a rise in public interest, which in turn prolongs attention to the issue. The president is able to accomplish this by giving media press releases, briefings, backgrounds, conferences, and interviews. Edwards and Woods take into account that presidential influence is not constant across all issues and that one actor may not have the same influence over time. In their article, the pair also examine whether the president is able to affect the "attention patterns" of Congress, which they state are foundational to agenda setting and gauge how strong an issue is.

Edwards and Woods propose that because some scholars have found inconclusive results, the media's impact may be less direct, and may be part of a "path of influence" (Edwards and

Woods 1999, 328). In addition to their evaluation of prior research, they discuss the importance of the work done by Cohen to show the president's ability to set the agenda of the public. Edwards and Woods also recognize the large amount of debate surrounding the media's influence on setting the policy agenda of public officials. They state that the other big portion of the debate is that if the relationship does exist, determining what direction it goes is also pertinent; i.e., whether it is the media that influences a president's agenda or vice versa.

Results are found through a time series analysis of attention by the president, media, and Congress to 5 key issues: crime, health care, education, U.S.-Soviet relations, and Arab-Israeli conflict. Edwards and Wood find that all three sectors react to issues, regardless if they are foreign or domestic. However, they find that there are different ways this occurs based on the individual issues themselves. They also talk about the role of inertia due to the following: presidents have issues that they are required to address, media has norms for what a good story will entail, and Congress has routines for organizing hearings. They break the results up into domestic policy and foreign policy categories.

On the subject of domestic issues, Edwards and Wood declare there to be an interactive relationship in which the president has the power to influence the agenda on issues of education, and health care. The president responds to media attention on crime and education, but does not respond to Congress. The seemingly most important finding was, on the contrary, that the president can set the agenda of Congress and bring attention to issues through the media if they are not already being covered. In this fashion, Edwards and Wood argue that the president can act as an entrepreneur to create attention where he wants to see change. Congress had no influence on the agenda of the president or media in their results. However, it was found that the media had an important role in agenda setting on both foreign and domestic issues. They state that these findings reinforce those from prior studies that focus on media's impact on shaping

institutional agendas. Yet, Edwards and Wood did more than reinforce prior findings; they advanced knowledge on the subject, and gave way to the rise of new questions in the agenda setting continuum.

Hurricane Katrina and the News

A lot of attention has been given to the victims of Hurricane Katrina, the struggles they encountered and the hardships many are still facing. The severity of the treatment of these victims by the government is well illustrated in Dan Baum's article "The Lost Year: Behind the Failure to Rebuild" and the documentary by Spike Lee, *When the Levees Broke*. After examining these sources it is difficult to deny that there was significant mistreatment and that much of it was racial in nature. To examine the extent of the discrimination, details of the aftermath of Katrina must be examined closer.

Reports that surfaced immediately following the storm estimated that there were only some 484,000 evacuees from Hurricane Katrina. More specifically, the measurements were in reference to the people who left before the storm. After disaster struck, the media started referring to the victims displaced from their homes as "refugees" instead of evacuees. Those who watched the news during this time probably recall hearing the word "refugees" used, but probably did not give it a second thought. However, the literal definition of the word refugee is "any person who is outside any country of such person's nationality or, in the case of a person having no nationality, is outside any country in which such person last habitually resided, and who is unable or unwilling to return to, and is unable or unwilling to avail himself or herself of the protection of, that country because of persecution or a well-founded fear of persecution on account of race, religion, nationality, membership in a particular social group, or political opinion" (Lectric Law Library). Even more illustrative of the meaning of the word are the listed synonyms for refugee, "exile and fugitive" (Collins Essential Thesaurus).

It is troubling to think that Americans would refer to other citizens who are in need as exiles or fugitives. People who have committed no crime but who are on the contrary are victims, and have been disassociated from their citizenship. Although it is shocking looking at this problem from the outside in, it also helps to hear an actual account of someone who has experienced such discrimination. Spike Lee's film, *When the Levees Broke*, offers several personal reactions from victims, but there are two that specifically address being called refugees that make a huge impact.

Both reactions are touching and conjure up many thoughts, especially since a number of actual short clips from news stations across the country depicting the frequent use of the word refugee when referring to victims of Katrina are inserted between them. The first response is by a man named Joseph Melancon from the Third Ward. "When I heard they called us refugees," he said, "I couldn't do nothin' but drop my head, because I say I'm a United States citizen of America. Call me a refugee!" The other response is from Gralen Banks, a resident of Uptown, who states, "…people leavin' New Orleans's they were refugees. Damn when the storm came in that blew away our citizenship too? What we forgot we weren't American citizens anymore?" Both accounts powerfully illustrate the significance and impact of the word "refugee" on the victims. Although the words of these statements are striking, so are the ways in which they are spoken by both men. There is a lot of emotion behind every word, and one can't help but to empathize with what they feel.

There are several ways to interpret why the media was using this term to describe the victims of Katrina. It is possible that one reason is simply a lack of knowledge. For instance, even if one source misrepresents information, whether due to the source's lack of knowledge or intent to purposely falsify information, the public is then likely to become accustomed to it. Others are then more likely to continue to spread the false information due to their own personal

lack of knowledge about the topic and lack of desire or opportunity to research everything given to them through the media.

Even in the same disaster, race can affect the treatment of people who are victims. Take the following photos from Yahoo's website for example [Figure 1]. Both contain Katrina evacuees who were forced to search for food due to lack of resources available to them. However, Yahoo's comments (see photo captions) regarding the two are quite different, which could be interpreted as displaying a shocking level of racism. The two photos have subsequently been removed from Yahoo's website after much controversy arose.

[Figure 1 Here]

The captions of these pictures could be said to blatantly depict a degree of racism that many Americans tend to overlook or naïvely believe does not exist in modern America society. Yet, racism is, in fact, still alive in America today. Some may not find this surprising at all, or even that an instance such as the one shown above could occur. However, considering the South has a reputation for being mired in "older times" and ideals, particularly with respect to race, it is no surprise that such a thing would arise from this area. Yet, for a major news source such as Yahoo to not only accuse one specific race of "looting," but to also not even provide details of the treatment of the victims of this disaster and why they had to resort to such tactics, is quite shocking. People of all races had to hunt for food since they were not provided with it. In both instances the individuals are trying to survive, yet according to the media, the African American is committing a crime while the Anglos are doing what is necessary to survive. If such racism can exist so openly in the media on a mass scale encompassing all of America, then it is reasonable to assume that it could still be prevalent in other areas of our society.

America is thought of as the land of opportunity, or the land of the free, not only by United States citizens, but by the vast majority of people all over the world. In fact, it is a place

that many come to in order to start a new life for themselves, or their families, in hopes that life in America will offer new opportunities to enhance their lives and future. The Unites States of America is a country with a government said to be of, by and for the people, founded on the idea that "All men are created equal," and that all men are granted certain rights that the government is obligated to protect (Declaration of Independence). However this has not always been so. America also has a troubled past, one that has entailed a long struggle in granting equal rights to all and an end to slavery and the legalized racism that followed.

The Civil Rights Movement seems so long ago that many young people today tend to see civil rights and unequal treatment as a thing of the past. However, if such blatant examples of racism are expressed in a major American media outlet, could they also continue to show up in particular government outlets and policies of today as well? Governmental policies under the Bush administration can be defined quite well as the "biopolitics of disposability" (Giroux, 2006). Bush's policies sought to eliminate or decrease the welfare state and affirmative action, as well as push to eradicate immigration. Such policies, according to Giroux, draw attention to or eliminate individuals that belong to these groups. Giroux states that this is because they are considered to exhaust a capitalizing nation and stand in the way of free market and trade, efficiency, and US hegemony. Therefore, people of the lower class, in particular minorities, are not perceived as assets to a growing economy, but actually a detriment to the society and are considered to be disposable (Giroux, 2006).

Policies aimed at abolishing the welfare state are particularly susceptible to being racist policies because many stereotypes in America perceive the majority of people on welfare to be poor African Americans. In fact, Neubeck and Cazenave (2001) present survey data which shows that many white people view welfare as a crutch for lazy African Americans who are unwilling to contribute to society and therefore should not be granted assistance. These data also

show that those who view welfare as a "black program" usually have hostile attitudes and desires to eliminate the program, and are also those who perpetuate the stereotypes about it (this includes the public as well as politicians). However, the truth of the welfare program is that both African-Americans and Caucasians have been equally represented in it for many years (Neubeck and Cazenave, 2001). Due to these problems with the perception of the welfare state, efforts to remove the welfare program are often recognized as racist policy choices.

Race's relationship with biopolitics and the perceptions of the welfare state, along with the disposal of it, leads into the susceptibility of blacks in particular when it comes to natural disasters. Previous studies of race's impact on victims of natural disasters have found that blacks are more vulnerable to damage and difficulties faced in the recovery phases of hurricanes in particular (Bullard, 2008). Therefore, the importance of examining the aftermath of the greater challenges faced by African Americans is needed to uncover why the group that needs the most assistance is not getting the aid they need.

> Minorities, particularly
> black households, are disproportionately located in
> poor quality housing segregated into low-valued neighborhoods.
> This segregation creates communities of fate that
> can take on added salience in a disaster context.
> (Peacock, Gillis, Morrow, and Gladvwn 1997).

The article, "Reconstruction of New Orleans after Hurricane Katrina: A Research Perspective" (Kates, Colten, and Leatherman, 2006) highlights the aftermath of the storm and the effects of rebuilding a damaged community by comparing Katrina to other disasters across sixty years in history. In the article, Kates et al. present us with evidence that there are "preexisting trajectories," which are amplified during the recovery phase of a disaster. They use examples

from Katrina, an earthquake in Tangshan, China, and droughts in the Great Plains to show that trends are accelerated in times of recovery after a disaster. The article suggests that if a community is well off and the economy and population are growing, that these areas will continue to show growth during the recovery period. However, if people are losing jobs and socially declining, then the disaster may speed this process up. This concept is then used as an explanation for the large increase in unemployment and decreases in population based on a 45-year trend of diminishing employment and life in New Orleans. They conclude by stating that all of the citizens who want to return to the city need to be given the appropriate help that they need and if we come together as a nation, we can all help the people of the city of New Orleans and aide in its reconstruction.

The significance of this article to my research is that if "preexisting trajectories" have been amplified following Katrina, then they are shown to the public through none other than the media. Therefore, how the media frames the issue can shape what people perceive of the conditions of the city. It is then up to media consumers to evaluate these trajectories and understand that the problems that have arisen in the aftermath of the storm may not be due entirely to the disaster itself, but more to the greater issues the community has been experiencing prior to the storm.

In a public opinion study, Lonna Rae Atkeson and Cherie D. Maestas (2009) looked at group identity models as a way of explaining differences in public opinion surrounding Hurricane Katrina. They found that one's race, along with "racial cues" presented by the media, had important implications for how the storm was viewed by the public. African Americans in the rest of the country felt that they could identify with the victims because of shared social problems, and therefore generally had more sympathy for the victims than whites, which tended to affect their perception of the storm and its aftermath. Atkeson and Maestas also found that 90

percent of Americans were somewhat or very attentive to news coverage surrounding Hurricane Katrina, and that African Americans were more attentive than those who were not black. The study also surveyed emotional responses and found that African Americans were more emotionally charged on the issues surrounding the disaster. Their findings show that many people blamed the government for its lack of preparedness and delayed response to the storm and also blamed individuals for ignoring the evacuation orders. However, nine out of ten African Americans blamed the government while those who were not black had mixed opinions on who was to blame. The findings also showed that blacks were more likely to see poverty and race as important factors to inadequate and delayed government response, while others thought these issues were less important.

Data and Methods

To examine the ways in which the media framed the events of Hurricane Katrina, I conducted a detailed study of two prominent U.S. newspapers, The New York Times (NYT) and the Wall Street Journal (WSJ). Every article on the disaster, for an entire month, was recorded and separated by week. Hurricane Katrina struck Louisiana on August 29, 2005, which is the start date for the data in this paper. There are some limitations to the use of these two sources. First, their target audiences are likely to be the politically attentive, as opposed to a television news source, which is likely to have a broader audience. The second limitation is that the two news sources vary in their content, due to a difference in their target audiences. For instance, the WSJ is business oriented and thus has a large focus on the economy when it comes to news coverage, where as the NYT focuses more on the public and social side of its new stories. Therefore, it is expected that there will be some differences between the two regarding word frequencies, especially among the social and economic categories.

Word frequency tests were conducted on the articles from both sources, with those words deemed meaningful, and with a word frequency of ten or above, assigned a value of 1. The meaningful words were then examined and the five most influential political, economic, social, and militant words were extracted from both sources. Bush, Nagin, Congress, FEMA, and Government are the political terms used. Oil, education, economy, health and aid are the terms used for the economic category. Poverty, white, black, race, and poor were used for the social terms. The war terms[1] include war, terrorism, evacuees, homeland, refugees, military, and police. Some of the terms consist of multiple words that fall into the categorization of a specific word. Table 1 lays out these categorizations below[2].

[Table1]

If one of the words was not found in one or more of the weeks, it was then assigned a value of 0 for its frequency. Such words may have been mentioned during the week, but since the number was less than 10 times they were not included in the results. There are separate graphs for each of these four categories for both papers. This method shows how the two sources changed the way they framed Hurricane Katrina and the victims of the catastrophe over a four-week period individually, and also allows for a comparison across the two sources.

[1] Note that the war category has two more terms than the other three categories. While not perfectly comparable, there was no obvious way to collapse the extra categories into five. Doing this would require the loss of important and interesting information.

[2] Note there are different numbers of words for each term which is an inconsistency. However, these terms were kept the same across both sources which allows for consistency between the sources.

Results

Political Category Frequency

[Figure 2 here]

[Figure 3 here]

The political graphs (Figure 2 and Figure 3) are fairly similar to one another in that Bush and the government were the two terms mentioned most often, both with significant spikes in the second week following the storm. Bush was also mentioned about the same number of times in both the third and fourth weeks in the NYT but in the WSJ, he was mentioned about half the amount of times in the fourth week as he was in the third. A significant difference between the two is that the NYT mentioned Mayor Nagin significantly more in the fourth week than they had in the previous three, while the WSJ did not mention him at all in the last week. Congress was mentioned slightly more in the WSJ than it was in the NYT. However, there was not much of a difference between the two regarding the frequency of FEMA. There were only 73 more mentions of FEMA overall in the NYT than in the WSJ. The first two weeks there was little difference between the two sources on the frequency of terms related to government, and even though both declined in the third week, the WSJ decreased more than the NYT did. The NYT decreased again in the fourth week while the WSJ's frequency for government rose again above the frequencies of both the first and third weeks.

Economic Category Frequency

[Figure 4]

[Figure 5]

As Figure 4 and Figure 5 show, oil was mentioned more overall in the WSJ than it was in the NYT, and the first and second weeks had little variance in frequency in the WSJ. On the other hand, oil's frequency dropped from 468 to 263 between the first and second weeks. Both

saw a decline in oil frequency during the third week and a rise again in the fourth. The word economy had the most stable frequency out of any other terms in this category for both sources. Aid was mentioned quite a bit in both papers, the difference seems to be that the largest occurrence of the word in the NYT was in the third week while in the WSJ it was in the second week. Also the second and third weeks in NYT did not differ too much on the frequency of the word economy while in the WSJ the frequency in the third week was about half of what it was in the second. The spike in health term frequency came in the third week for the NYT, but in the second week for the WSJ. Education was mentioned more in the NYT and both increased frequency in the third weeks and decreased in the fourth. However, the term took a larger decline in the WSJ than it did in the NYT.

Social Category Frequency

[Figure 6]

[Figure 7]

The social group category is the one with the most significant differences between the two papers. As shown in Figure 6, overall the NYT had more frequencies for every word within the social category. Both sources mentioned white more than any other word within the category with significant spikes for the NYT in the second and fourth weeks and a spike in the WSJ for the second week. Figure 7 shows poverty was mentioned in only the third week in the WSJ, which is surprising. Similarly, the only mention of the word black in the WSJ was in the second week while this word was the second most mentioned word in the NYT for all four weeks. The word Race was not mentioned at all in the WSJ for the whole month even though white and black were mentioned. And although the WSJ did not use the word poverty except for in the third week, the word poor was mentioned quite a bit, with a spike in the third week.

War Category Frequency

[Figure 8]

[Figure 9]

The war category is interesting for many reasons, one being that in the wake of a natural disaster that any source would talk about war within the same article and context as the devastating effects of Hurricane Katrina. Of the two sources, the military had the highest frequencies compared to other terms. Figure 8 shows that the police term fell considerably between the second and third weeks in the NYT, with a word frequency difference of 195, and then rose slightly in the fourth week. The evacuee term rose drastically in the fourth week in the NYT, yet rose in the second week in the WSJ, and the frequency of the term stayed constant for the three other weeks. Refugees were mentioned much more in the NYT with frequencies ranging from 27 to 15 during the first three weeks, with no mention of the term in the fourth week. On the other hand, the WSJ only used the term during week two. Homeland was only mentioned by the WSJ in the second and third weeks at about the same frequency and was mentioned for all four weeks in the NYT, with a small boost in frequency in the second week. The term war had higher frequencies during the second and third weeks in the WSJ (with frequencies in the 60s), than it did in the first or fourth week (with frequencies in the teens). As for the NYT, the war term rose in the second week and decreased slightly in the third week and again in the fourth. Lastly is the terrorism term. The term was mentioned more than both the homeland term and refugees term in the NYT. Yet in the WSJ, the terrorism term was only mentioned in the second and fourth week with frequencies in the twenties.

Overall Category Frequency for NYT

[Figure 10]

Figure 10 illustrates the sum of all the terms in each category for each week studied for the NYT. Over all, political terms were mentioned most during the second week, as were war terms. The difference in the two categories is primarily in the fourth week where war term frequency increased to surpass the frequency of week three, while the political term frequency kept declining. The economic category did not differ much between the second and third weeks which had only slightly higher frequencies than in the first week, and decreased in the final week. The social term stayed the most constant out of all four categories, with slight increases in the second and fourth weeks.

Overall Category Frequency for WSJ

[Figure 11]

The WSJ shows a trend over all four categories in Figure 11. Each category had higher frequencies during the second week following Hurricane Katrina, decreased in the third week, and again in the fourth. The frequencies in the economic category were higher overall than in any other category and the social category had the smallest change in frequency; it was also the least mentioned out of all four categories.

Changes in Frequency over Time for NYT

[Figure 12]

Figure 12 presents the changes in frequencies for each category in the NYT. The data show that economic word frequencies almost leveled off in the first three weeks, and then declined by the fourth. The political terms had a lower frequency in the first week than both the war terms and economic terms, but spiked in the second week above both categories. The frequency of political terms then dropped back below economic frequencies by the third week,

but remained above war terms for the remaining two weeks. The social category stayed relatively level for most of the month, with minor dips in the first and third weeks. The war terms are interesting because they spiked in the second week then dropped significantly by the third week and leveled out with a slight increase by the fourth week. Although it may be hard to infer from the graph, economic terms had the highest frequencies during the four weeks, followed by political (with a difference of 383), then war and finally social.

Changes in Frequency over Time for WSJ

[Figure 13]

The changes over time for the WSJ as illustrated in Figure 13 were much different than the NYT. The political, economic and war terms all follow a very similar pattern, with an increase in frequency during the second week and a continuing decline for the remaining time. The social category also follows this, but the difference in its spike is significantly lower than any of the other terms. Overall, economic terms had the highest frequencies followed by political terms, then war, and finally social. The gap between the frequencies of economic terms and political terms was much higher for the WSJ than the NYT, with a difference between the two of 1169, when the gap between the two for the NYT was only 383.

Looking at the total frequencies of each category also helps paint a clearer picture of the differences between the two sources. The most significant difference is the economic category, as it was one of the only categories without a significant spike in frequency in the NYT. While the social category did not increase much in the NYT, it also did not in the WSJ. Also, the WSJ established much more of a pattern among the categories in regards to frequencies, while the NYT frequencies were not as straight forward.

Interpreting the Results

These results indicate that the media can frame the same straightforward topic in very different ways. This has two implications for the media audience; news sources will vary in the way they frame the same issues, and an issue can be framed differently over time even within the same source. The figures above show the NYT had a tendency to focus on a variety of topics, the two largest being political and economic, with war terms not far behind, while the WSJ had more mention of economic terms above any other for the whole month. Considering the previous work regarding agenda setting by the media, this shows that the agenda of the public was likely to differ between consumers of the NYT and consumers of the WSJ. The findings also show that the agendas of NYT consumers was likely to shift over time after the storm, as were the agendas of WSJ consumers. Framing differences within the same source could be due to the issues that arose after the storm hit, such as government response evaluations, an increase in violence, and other increasing and declining political, social, or economic aspects of life that were directly or indirectly affected by Hurricane Katrina.

Framing is considered to be the means by which a media source identifies and structures a public controversy or political issue (Nelson, Clawson and Oxley, 1997). The idea of framing is that by stressing certain elements or features, an otherwise complex issue is reduced into a few specific aspects of it, which help an individual better understand and develop opinion regarding the issue (Ibid). Nelson and his colleagues show the importance of framing through a study on tolerance for the Ku Klux Klan. They do so by showing the same issue to participants, but framed in different ways. Those participants who saw the Ku Klux Klan demonstration and rally framed with an emphasis on civil liberties, such as free speech and right to assembly, showed more tolerance for the group than those who viewed it in the frame of public order showing the

potential dangers, violence, and police action that the rallies create. This illustrates how large of an effect framing can have on a particular issue.

If something as controversial as a Ku Klux Klan rally can be perceived so differently among viewers depending on how it is framed, then the controversy surrounding the aftermath of Katrina is likely to also be perceived differently among the public. It is clear through examining the results above that the issue was framed differently among these two sources, which has different implications for the consumers of both. On the one hand, not all of the framing of Katrina can be narrowed down into this study especially given the various types of news sources, such as other newspapers, the Internet, local news, and cable 24/7 national news cycles. However, this study can shed light on how many differences can exist just between two sources and the implications these frames in particular can hold for the public.

For example, Kathleen Tierney, Christine Bevc, and Ericka Kuligowski (2006) state that the media framed Hurricane Katrina in ways that emphasized and exaggerated the lawlessness and looting following the disaster. The article also states that the media employed civil unrest as a frame for the disaster, and later characterized victim behavior as equivalent to urban warfare. Tierney and her colleagues also state that these frames reflect specific policy decisions in which the military needs to have more of a role in disaster relief. The evidence above presented in this paper underscores Tierney's claim through the large frequencies for the war category, as well as all of the terms within it: war, terrorism/9-11, evacuees, refugees, homeland, military and police officers all conjure up thoughts related to the civil unrest and urban warfare frames.

"Refugee" in particular frames Hurricane Katrina in a dramatic way. As mentioned previously, the word has strong implications and has been the subject of much controversy in light of the disaster. According to Adeline Masquelier (2006), the controversy over the use of refugee was about more than being politically correct; it exposed a gap that exists between

theoretical and practical realities, one which could not be fixed by any form of emergency disaster planning. Not only is the term a misidentification of the victims, it was also viewed to be part of a larger, radicalized discourse that also focused on poverty and the poor, and criminalized the victims of the disaster.

The above evaluation of specific terms is pertinent because all of them were identified within the two sources studied. Although the NYT tended to have higher frequencies regarding social words, both sources employed them. These frames led victims who were displaced from the storm to reprimand the media and claim that the terms stripped them of their citizenship, culture, and history. Such terms also diluted the American Dream, by taking away the notions of a nation with an independent and successful public, and also took away the concept of America being a "nation that takes care of its own" (Masquelier 2006, 736).

Conclusion

Although the two sources are likely to focus on a select percentage of the population i.e., those more politically aware than the average American, these findings are still important. They show that not only does the media frame even a straightforward catastrophe in different ways, but the specific ways in which they framed the disaster have important implications for the views of the public. The work by Iyengar, Peters, and Kinder shows that setting the agenda of the public is not temporary and has long-term effects, which mean these specific frames of Hurricane Katrina are likely still relevant today. If Entman's theory of selective exposure is correct, then the audiences of the NYT and WSJ chose these sources because they agree with them, but these same sources are also telling these individuals what to think about the issues presented.

The selection of sources becomes even more important when reexamining the work done by MacKuen, which states more politically attentive individuals have a larger instability when it

comes to media persuasion than anyone else. MacKuen's key finding, remember, is that the agendas of the educated are more likely to be influenced by media by more than double than their uneducated/ less informed counterparts. This suggests that although the audiences of the WSJ and NYT may not be representative of the population as a whole, the framing of these sources has substantial, if not greater, implications than a study of the average public. Future research would benefit from a similar analysis of different forms of media, namely television or the Internet, and would be useful to include in a study to determine if those who viewed different frames of Hurricane Katrina felt differently from one another, or if their opinions changed over time. Public opinion on specific words such as refugee would also be pertinent to such a study to illustrate the potent implications these frames have.

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Figure 1

<http://www.aamovement.net/news/news_images/katrinayahoo.jpg>

Table 1

Political Terms	**Includes**
Bush	Bush('s), President('s)
Nagin	Nagin, Mayor
Congress	Congress
FEMA	FEMA
Government	Government('s), Administration('s)
Economic Terms	**Includes**
Oil	Oil, Gas, Gasoline, Fuel, Refinery, Refineries
Education	Education, School(s), College(s), University
Economy	Economy
Health	Health, Insurance, Insured, Patients, Hospital
Aid	Aid, Assistance, Relief, Rescue
Social Terms	**Includes**
Poverty	Poverty, Homeless
White	White(s)
Black	Black(s)
Race	Race
Poor	Poor
War Terms	**Includes**
War	War, Iraq
Terrorism	Terrorism, Terrorist, 9-11
Evacuees	Evacuees, Evacuated, Evacuations
Homeland	Homeland
Refugees	Refugees
Military	Military, Guard(s), Army, Soldiers, Troops, Security
Police	Police, Officer(s)

Figure 2: Political Terms in New York Times

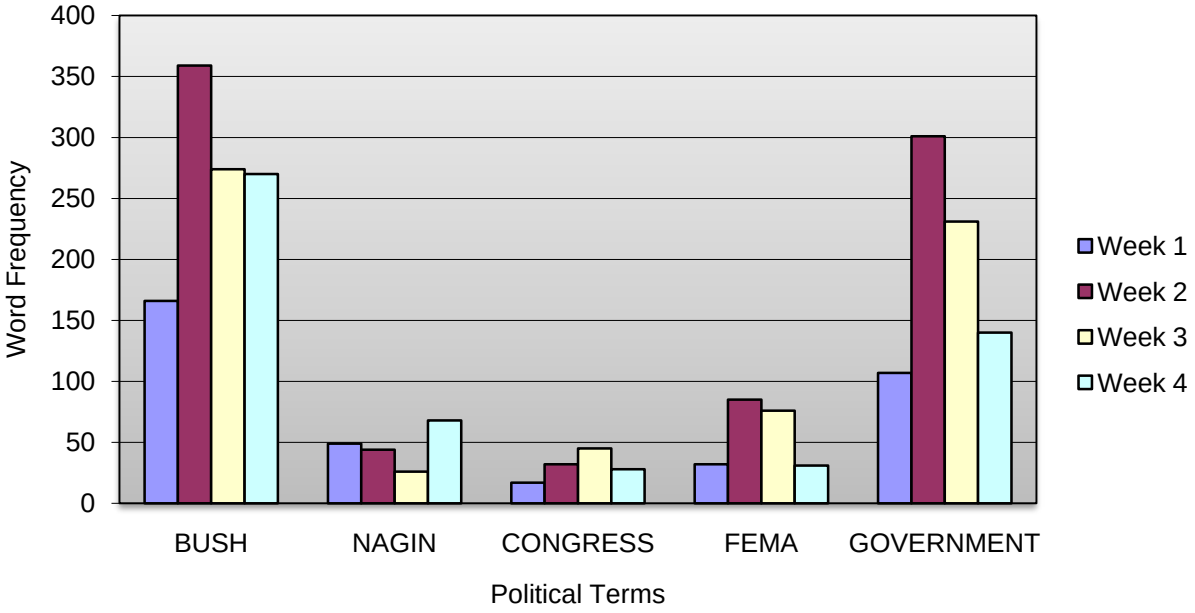

Figure 3: Political Terms in Wall Street Journal

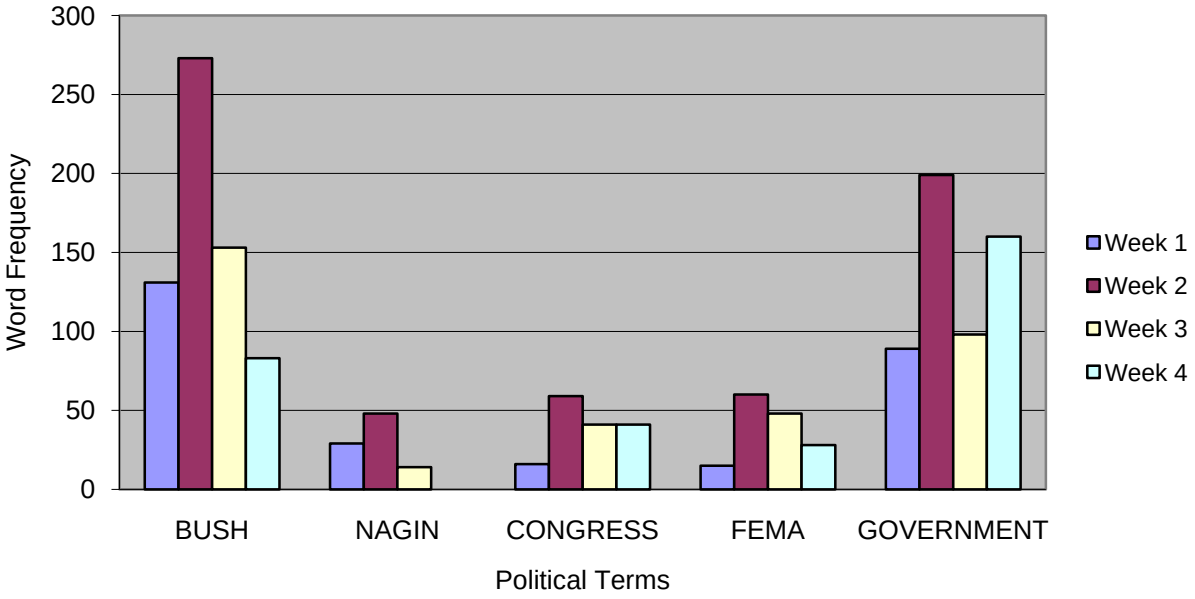

Figure 4: Economic Terms in New York Times

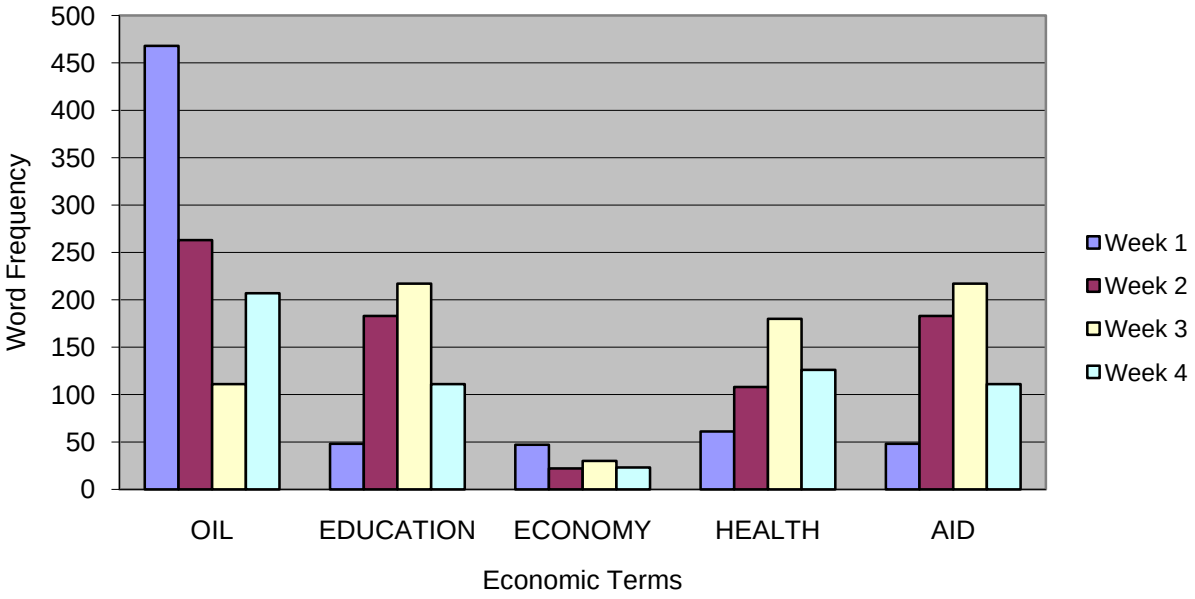

Figure 5: Economic Terms in Wall Street Journal

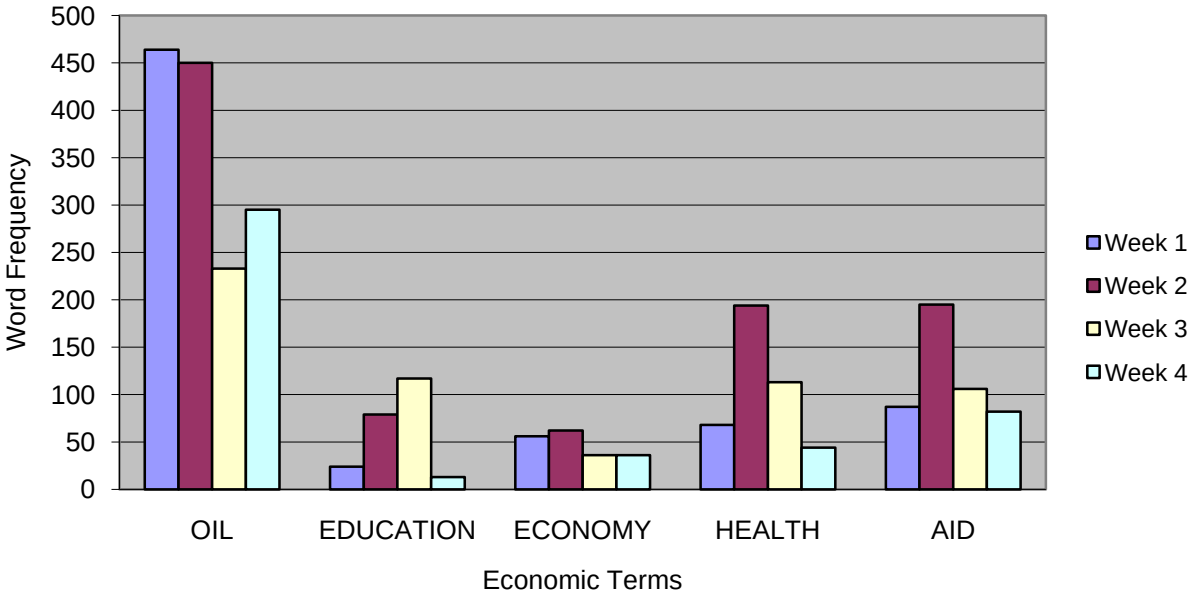

Figure 6: Social Terms in New York Times

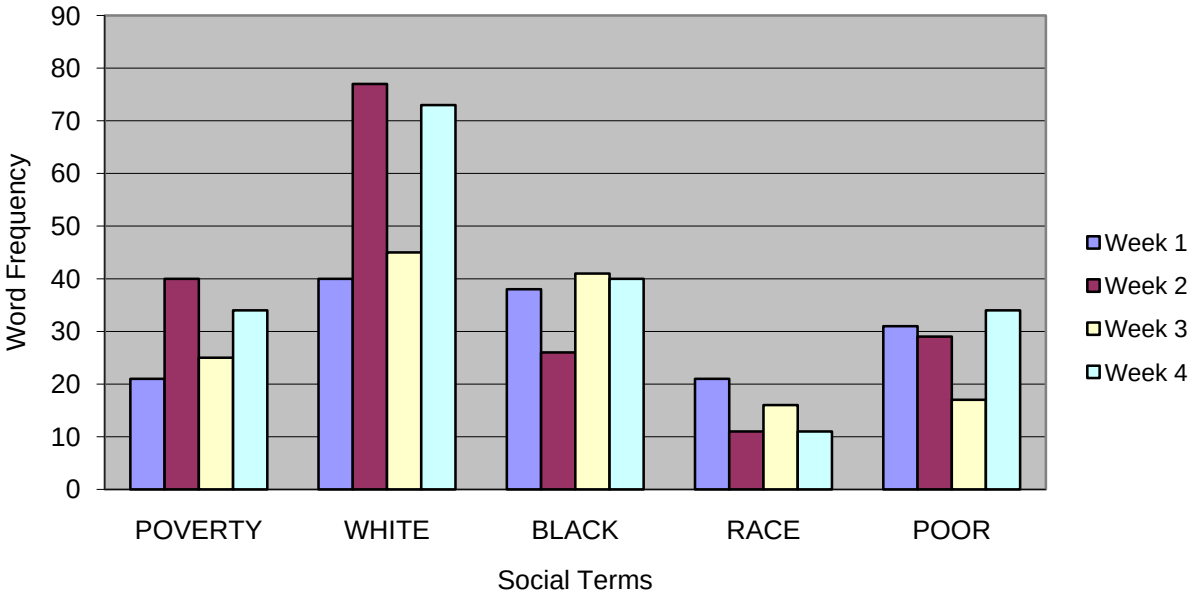

Figure 7: Social Terms in Wall Street Journal

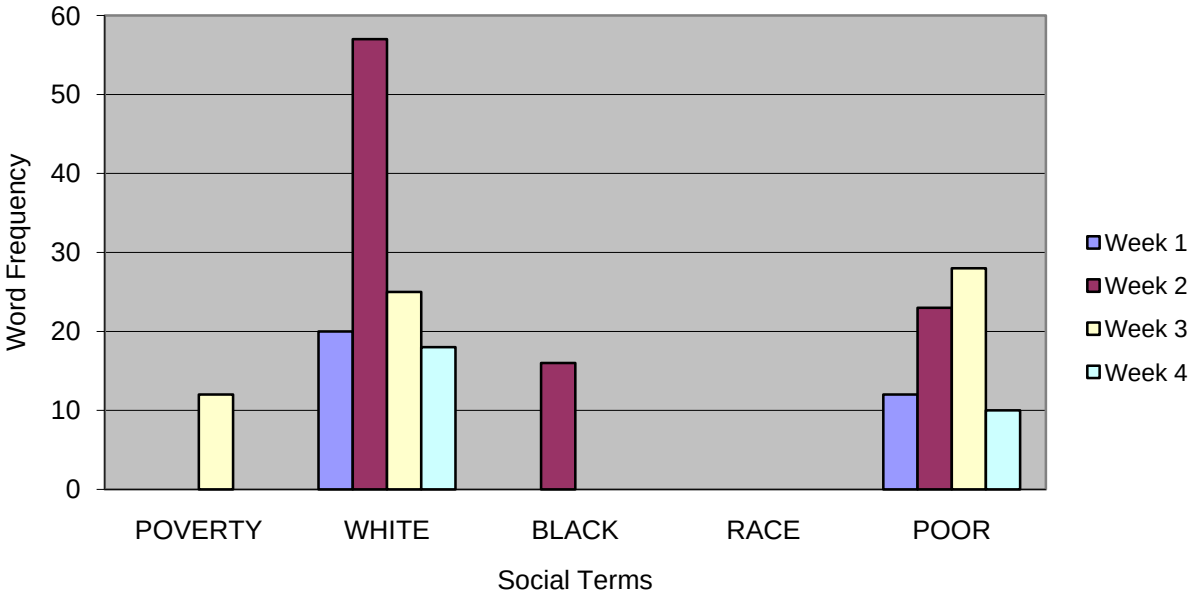

Figure 8: War Terms in New York Times

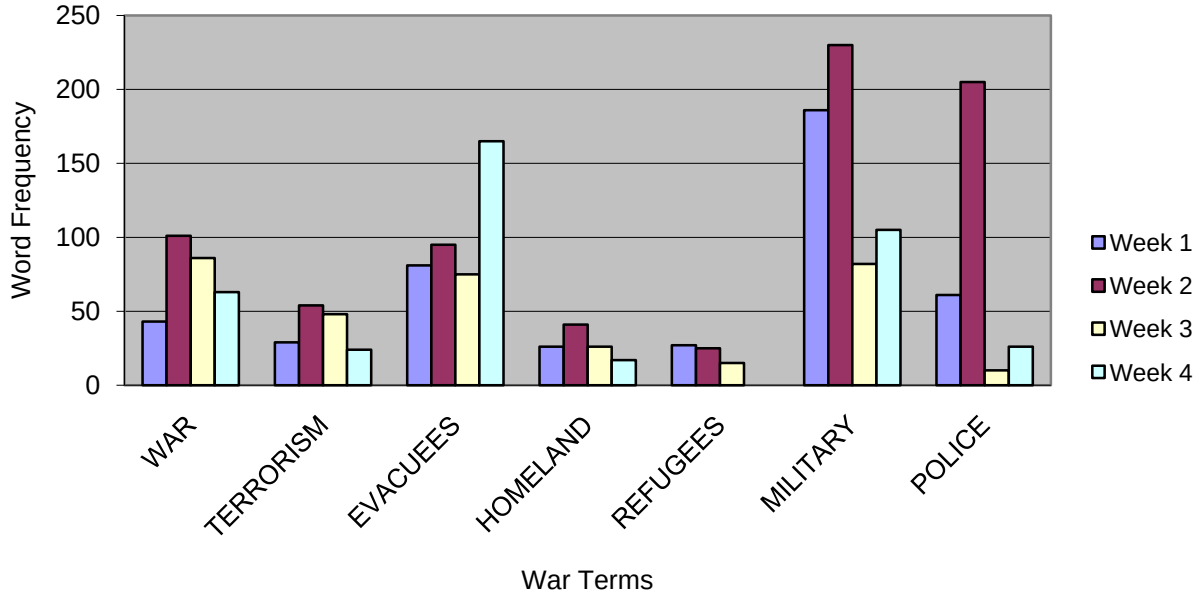

Figure 9: War Terms in Wall Street Journal

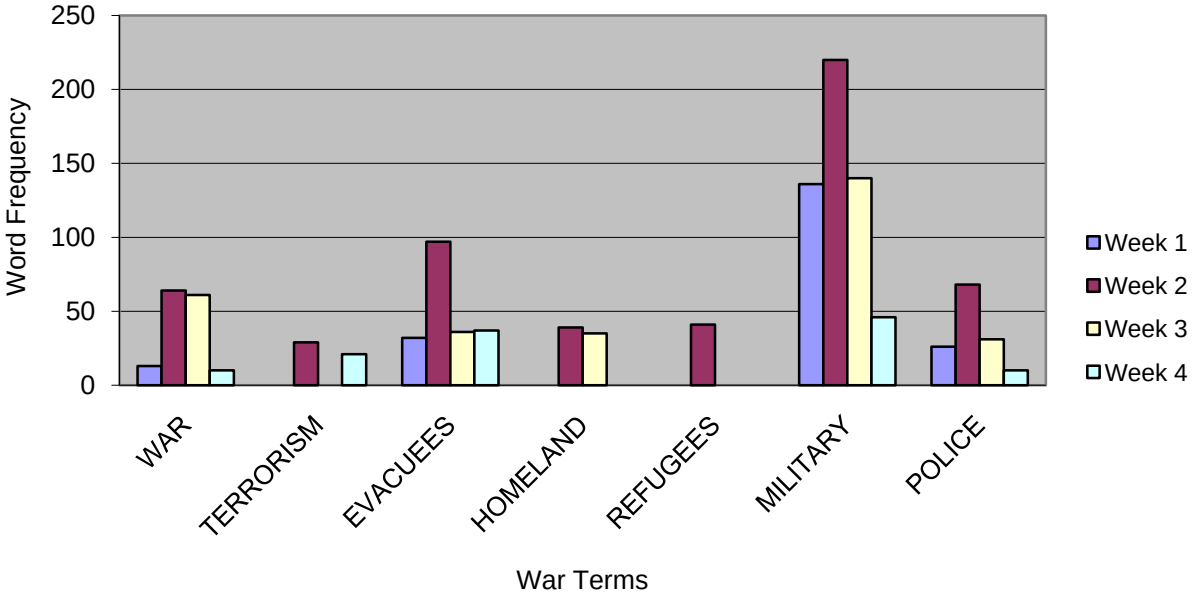

Figure 10: Total Frequency of Terms by Category for New York Times

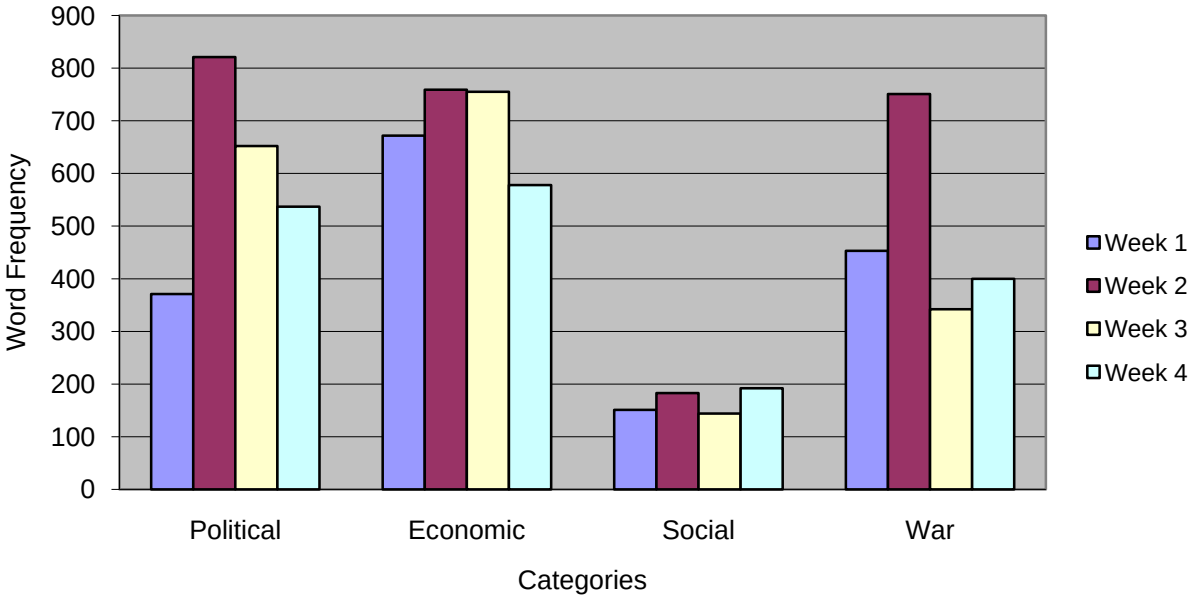

Figure 11: Total Frequency of Terms by Category for Wall Street Journal

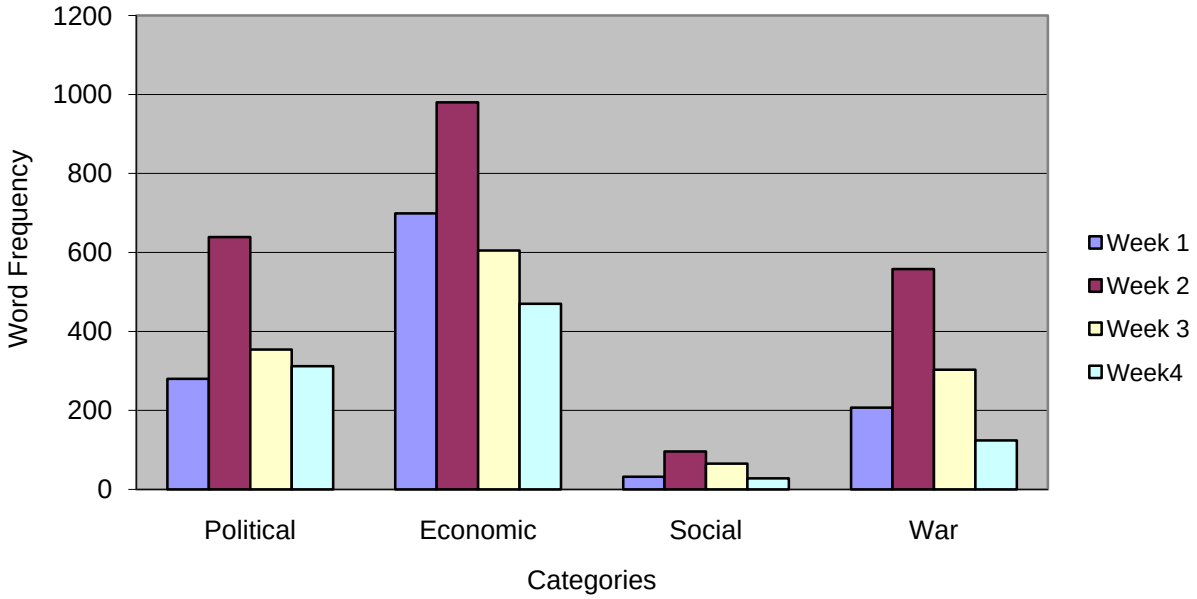

Figure 12: Changes in Frequency over Time by Category for New York Times

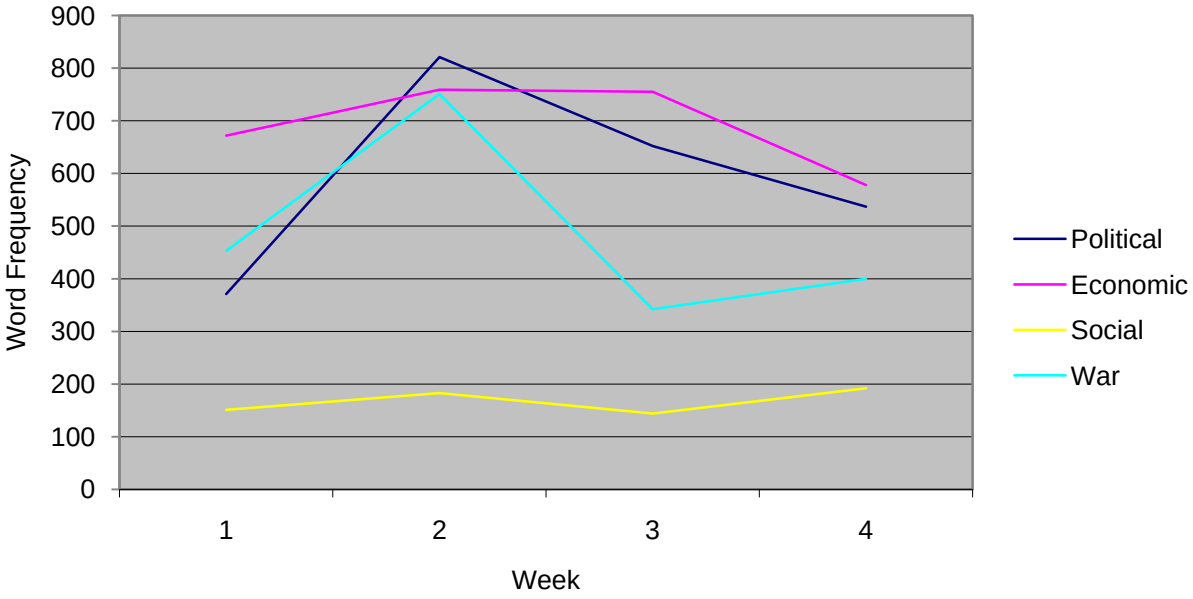

Figure 13: Changes in Frequency over Time by Category for Wall Street Journal