TECHNOLOGY AND ITS EFFECTS ON CLASSIFIED INFORMATION LEAKS

JAMES SUNG HAK LEE

UNDERGRADUATE HONORS THESIS
SANFORD SCHOOL OF PUBLIC POLICY
DUKE UNIVERSITY, DURHAM, NC
DECEMBER 2011

ABSTRACT

This project compares the release of information through the mediums of print, television and Internet technology in regards to classified information leaks. Using the Pentagon Papers, Iran-Contra, Abu Ghraib and Afghan War Diary scandals as case studies, I find that technology has increased the volume of leak coverage but had no effect on the speed in which information was released. Each media outlet also showed unique patterns of coverage distribution: print had consistent coverage, television had scattered spikes in coverage, and the web had high initial coverage that faded away quickly. Qualitative analysis highlighted the changing nature of framing in the articles pertaining to the leak throughout the case studies and the increase in the use of technology by the leaker to achieve greater anonymity. Policy changes as result of the leak of information have addressed the content of the leak but the not the leaks themselves.

“There should be at least one leak like the Pentagon Papers every year.”

-Daniel Ellsberg

TABLE OF CONTENTS

Introduction **3**

Research Questions **4**

Theoretical Framework **4**

Leaks: importance, actors and consequences *4*

Driving forces of a leak *5*

Technological advancements *7*

The media, technology and leaks *8*

The media space *10*

The public attention span and social relevance *11*

Hypotheses **12**

Methodology **13**

Cases *13*

Data Collection *14*

Case Studies *17*

The Pentagon Papers 17

Iran-Contra 19

Abu Ghraib 21

The Afghan War Diary 24

Data Analysis *27*

Observable Implications *27*

Limitations *28*

Results and Analysis **29**

Hypothesis 1: *29*

Hypothesis 2: *38*

Hypothesis 3: *45*

Hypothesis 4: *46*

Conclusions **51**

Technology's role in leak dispersion *51*

Unanticipated Findings *52*

Further Research *54*

Bibliography **55**

Acknowledgments **57**

TABLES AND FIGURES

TABLE 1: WORD COUNTS 32

FIGURE 1: AGGREGATE COVERAGE OF LEAKS ARRANGED BY CASE STUDY 29
FIGURE 2: AGGREGATE COVERAGE OF CASE STUDIES ARRANGED BY MEDIA OUTLET 31
FIGURE 3: APPROXIMATE WORD COUNTS ARRANGED BY EACH OUTLET 33
FIGURE 4: VOLUME OF COVERAGE FOR LEAKS 34
FIGURE 5: TOTAL TELEVISION AIRTIME FOR EACH CASE STUDY 35
FIGURE 6: AVERAGE TELEVISION AIRTIME 37
FIGURE 7: NUMBER OF ARTICLES RELEASED THROUGHOUT 30 DAYS SINCE RELEASE (PENTAGON PAPERS) 38
FIGURE 8: NUMBER OF ARTICLES RELEASED THROUGHOUT 30 DAYS SINCE RELEASE (IRAN-CONTRA) 39
FIGURE 9: NUMBER OF ARTICLES RELEASED THROUGHOUT 30 DAYS SINCE RELEASE (ABU GHRAIB) 40
FIGURE 10: NUMBER OF ARTICLES RELEASED THROUGHOUT 30 DAYS SINCE RELEASE (AFGHAN WAR DIARY) 41
FIGURE 11: COMPARISON OF PRINT DISTRIBUTION DURING 30 DAY PERIOD 42
FIGURE 12: COMPARISON OF TELEVISION DISTRIBUTION DURING 30 DAY PERIOD 43
FIGURE 13: COMPARISON OF WEB DISTRIBUTION DURING 30 DAY PERIOD 44
FIGURE 14: DAYS SINCE LEAK CREATION AND FIRST DAY LEAK IS PUBLISHED IN THE MEDIA 45
FIGURE 15: PRINT COVERAGE OF CASE STUDIES FOR YEAR FOLLOWING INITIAL LEAK 48
FIGURE 16: TELEVISION COVERAGE OF CASE STUDIES FOR YEAR FOLLOWING INITIAL LEAK 49
FIGURE 17: WEB COVERAGE OF CASE STUDIES FOR YEAR FOLLOWING INITIAL LEAK 50

INTRODUCTION

In April 2010, gun-sight footage of a July 12 2007 Baghdad airstrike showing the murder of journalists and Iraqi civilians by an Apache helicopter was released by a website called Wikileaks. Three months later, the website published the Afghan War Diary: a collection of over 76,900 classified documents detailing the War in Afghanistan, and in October 2010 released the Iraq War Logs: 400,000 documents that recorded the details of every American casualty in Iraq and Iran, in coordination with major commercial media organizations.

The creation and explosion of Wikileaks exposed vulnerabilities in the security of classified government information. The involvement of The *New York Times*, one of the most respected news outlets in the world, as a liaison for the leaked information raised concerns about the ethics of information distribution and the nature of sensitive government information.

For Wikileaks, the Internet was its driving force in the transfer, distribution and public reception of information. The Internet, however, is not the only means of leaking information to the public. Intelligence leaks have been a part of modern history since 1773 with The Hutchison Letters, when private letters condemning colonial rights were leaked, to the more recent incidents in Abu Ghraib. All share the use of technology as a common denominator, though the technology itself might vary: relying on some form of technology to document and disperse information to the public.

So has the development of technology affected the spread of classified military information? Do technologies require punitive government reform? How have developments in technology affected media coverage of events in history? Consequently, how has public interest and

retention been affected by advancements in technology? How has technology changed the practice of 'leaking' from creation to reception?

RESEARCH QUESTIONS

The central research question is: How has changing technology affected the nature of leaks within the field of military information?

Furthermore, how has technology affected the coverage of leaks across print, television and web mediums?

THEORETICAL FRAMEWORK

LEAKS: IMPORTANCE, ACTORS AND CONSEQUENCES

Government exposés have taken numerous forms and methods throughout American history. Investigative reporting has traditionally exposed shortcomings in American democracy (Protess & Cook, 1992) and leaks in military information have been no different.

Leaks are defined to be the act of becoming known despite efforts at concealment and the giving out of information surreptitiously (Merriam-Webster, 2011). The database Issues & Controversies On File (2010) similarly defines leaks and differentiates between classified and unclassified information, the authorized and unauthorized. It is important to distinguish between them as only classified information can be leaked[1]. Classified information is defined as information that "the executive branch and its subordinate intelligence agencies decide who will be given access to sensitive intelligence on sources and methods, and at times, covert operations"

[1] However, there could be information that is not public and not classified but considered a "leak" such as politically embarrassing information.

(Doorey, 2007). This thesis focuses on classified information leaked through unauthorized channels: making the leaks illegal and punishable. More specifically, leaks will be defined as material that reveal classified military information pertaining to war personnel, weaponry and tactics, to the public from a non-governmental source.

Exposés spotlight errors within society, whether the responsibilities fall on the government or corporations and act as an outlet for policy reform and an advocate for civic morality (Protess & Cook, 1992). Those involved with an exposé range from the leakers, officials whose integrity is threatened, the victims, government enforcers and the public. The leakers range from sources inside the government, muckrakers and even major news agencies. These actors are consistent throughout the exposure and dispersion of hidden governmental information (Protess & Cook, 1992). For this thesis, a leaker will be the person who initially releases the information to a media agency and the agency that leaks the information to the public will be the leaking agency.

In addition to legal punishment, the unauthorized release of classified information have broader societal and policy implications. With every new unauthorized leak in government information, the government alters the way it handles and protects classified information (Gerecht, 2006) and develops policy that limit and deal with leaks in terms of national security (Database of Issues & Controversies, 2010). Though some applaud leaks because they impose transparency and uphold accountability, leaks of highly classified government information can endanger the public and merit legal prosecution of the publishing actors (Schoenfeld, 2010). With this in mind, what would lead someone to leak confidential information that could undermine the greater good?

DRIVING FORCES OF A LEAK

Traditionally, investigative reporters see their main goals in releasing information as to "satisfy the reformer", and technology has allowed modern reporters to follow up their initial exposés

and reinforce their findings (Protess & Cook, 1992). Leaks have not only been used to inform the public, but also to rattle government administrators. Subsequently, the success of a leak is dependent upon the quality of information that serves as the foundation of the leak (Schoenfeld, 2010).

Throughout American history, there has been a fundamental tension between security and openness. 'Leaking', a well-established convention that the government has dealt with, has reached an extreme, especially in the post 9/11 era, in which the news that is leaked makes the nation vulnerable to its enemies (Schoenfeld, 2010). There is a growing rift between a press that sees its duty as to promote the public's right to know and a government that increasingly tries to protect sensitive documents that are often vital to effective foreign policy. Leakers argue for civil liberties and the right to know (Sifry, 2011), while the government tries to balance this with security protocol to satisfy a growingly anxious public and reinforce confidence.

Demand for transparency by governmental critics and the public have increased with public suspicion. Consequently, intelligence transparency has greater importance for the public and wields more power for government officials and branches. Public scrutiny and government accountability have become greater issues in the public sphere (Doorey, 2007). Leakers, journalists and whistleblowers create public awareness of government misdeeds to hold the government accountable. If the leak is credible, journalists, politicians and the public can use this leaked information to identify the true root of the conflict and hold those responsible for the exposed misdeeds (Cordesman, 2010) and achieve beneficial outcomes for all actors involved.

In order for leaks to promote change, they must be received and circulated publically. To achieve this, leakers use media publications and their corresponding technologies as means to disperse

the information securely and widely. Though there is a spectrum of media outlets, the most widespread release mechanisms have been print media, television and the Internet.

TECHNOLOGICAL ADVANCEMENTS

It is undeniable that technologies used to disperse information have developed in sophistication and increased in prevalence during the 20th century: changing the media landscape for both the reporting agencies and the public.

Major developments in the last century have begun with the introduction of television broadcasts in 1936, adding to already established print and radio outlets. In the U.S., regular mass broadcasts began in 1948, color broadcasts in 1964, followed by cable and satellite television and the Internet (Stephens, 2000).

For print media, technological innovation was better printing and computer technology: easing the process of not only publishing the paper but also writing stories. Physical circulation has however been decreasing[2] due to the increasing presence of the Internet (Newspaper Association of America, 2011). Competition for attention from television and the Internet has accelerated the drop in advertising, causing reporting resources to drop and circulation to decrease. Moreover, the nature of print media has become an increasingly one-way medium constrained by a lack of feedback (Kent, 1999).

Television has changed the American cultural landscape along with the manner in which information is released. In the beginning, television sets were sparse and only communities that were within range of television stations had access to broadcasts. Now, more than half the homes in the U.S. have three or more televisions (Nielsen Wire, 2009). Televisions have become a

[2]Total circulation has decreased from the 60,000,000 in the 1990s to 46,850,000 copies in 2009.

household necessity with 99 percent of American households owning at least one set, a growth from the 77 percent of households that owned at least one set as of 1955 (A.C. Nielsen Co., 2009). In the U.S. alone, there are currently more than 219 million television sets (CIA World Factbook, 2007), a number that is still growing.

The Internet was developed in the 1960s (Howe, 2010) to globally share scientific and military information on research development. It was with the development of the World Wide Web (WWW) in 1991, that a friendly user interface was developed (Howe, 2010). Real commercialization began in 1994 as the Internet became home to 10,000 WWW sites and 10,000 news groups and the Internet has been growing ever since (Marsh, 2011). According to the U.S. Census Bureau, in 2009, 68.7 percent of American households had Internet access at home, and 76.7 percent of households had someone who had Internet access from some location other than home (U.S. Census Bureau, 2009).

The media and technology have a symbiotic relationship. Technological developments have caused the media to become a driving force in international politics. With improvements in technology, each media outlet became more effective, efficient, and in many cases more, profitable. The increased ease of releasing information allows for information to be released faster and in greater quantity.

THE MEDIA, TECHNOLOGY AND LEAKS

A leak ultimately aims to expose institutional wrongdoings and prompt social change. Technological advancements, such as the evolution from the telegraph to the Internet, and its roles in various wars from World War I to the Gulf War, can be explored to show how technology has aided and altered political outcomes in wartime situations (Neuman, 1996). Additionally, the success or failure of a war is very malleable, and “reality” can be manipulated

through the media's framing devices used to portray stories from specific angles, highlighting certain features over others (Baum & Groeling, 2008). So the frame and rate of coverage can affect how much the public knows and perceive the issues at hand. A leak revealing information on government wrongdoings could initiate the public to adopt a negative view of the government. The more exposed the public is to information, the more likely it will take on the views presented in the articles.

The volume of coverage is dependent upon variables such as scope, location and content. Ultimately, what becomes news is the result of a cost-benefit analysis. Media agencies assess the cost of publishing an article: the cost of reporters and their expertise and the actual cost to publish the article, and weigh it against the benefits of the article: viewership that could lead to increased advertising and ultimately revenue (Hamilton, 2004). Hamilton argues that: "News is a commodity, not a mirror image of reality." Coverage is determined by what sells and since technology has decrease the cost of releasing information[3], the amount of news covered has increased. Moreover, technological developments have made 'real-time information' possible and each technological advancement has changed the cycle of information transfer between the government and the public.

With this increasing demand for immediate news, reporters growingly depend on technology for information and stories. Technology has allowed news agencies to buy stories at a cheaper cost rather than invest its time and manpower into assembling a story. This has influenced the content released by news agencies: coverage has become more homogenous throughout various news agencies as they have come to rely on wire services (Hamilton, 2004).

[3] Costs such as the cost of transferring of information, production cost and even opportunity cost

With technological growth and development, the impact of non-traditional media has grown, especially in relation to wartime coverage (Wall, 2008). Technology has not only made it easier and cheaper to disperse leaks, but has added a wall of anonymity for the leakers. However, information being leaked through rogue actors might not be authenticated and will not have the rationality deemed professional journalism (Allan & Thorsen, 2009).

THE MEDIA SPACE

Technology has also changed the way the media market is shaped. Traditional forms of media, such as print, are on the decline, exacerbated by the double dip economic crisis (Kurpius, Metzgar, & Rowley, 2010). This "gradual erosion"[4] of the financial base has been attributed to increasing pressure from new media and decreasing advertising revenue (Picard, 2003). Television has also seen a decrease in operations[5] as long-term advertising shifts toward social and interactive media such as the Internet (Vanboskirk, 2009).

The 2009 State of the News Media report highlights an increase in the public's usage of the Internet to access news: with daily print circulation declining by 4.6 percent, traffic to the top 50 Internet news sites increased 27 percent in 2008. The wide reach, interactivity and relatively low cost of the Internet has spurred media market growth, as innovators search for novel methods to identify, collect and disseminate news (Kurpius et al, 2010).

As the amount of information increases exponentially, it has slowly moved into cyber space that is not bound by the physical constraints of space and time found in print and television. These restrictions force print and television to limit the space allocated to each story to compensate for the higher volume of stories. This has led to outlets restricting their coverage to report only the

[4] In the past 2 years, print advertising has declined 23% (Project for Excellence in Journalism, 2009)
[5] Such as downsizing in staff and foreign bureaus

most crucial parts of a story. More so, print and television agencies have used the Internet to their advantage to promote extra content that did not make it onto print or broadcasts (Kent, 1999).

THE PUBLIC ATTENTION SPAN AND SOCIAL RELEVANCE

The effect of technology has not been one-dimensional: it has also had an impact on those receiving, digesting and retaining information.

It is believed that technology's effect on human attention spans has not been positive. Shortened attention spans among the American public have been assumed to be the result of changes in media content developed by changes in technology (Newman, 2010). Technology has developed a contemporary online 'snack' culture emphasizing brevity and fragmentation. This is represented in the overly flashy methods that producers have introduced to capture fleeting audience attention (Canby, 1971). Av Westin, an ABC News producer, said that the viewer's attention span will not stand for segments longer than two minutes (Zoglin, 1975). Research has confirmed that increased television exposure shortens attention spans (Barkley, 2004). Newman argues that the short attention span is an inevitable consequence that threatens traditional firms such as print media: leading to quick and snappier story coverage.

Moreover, an event is only socially relevant if there is public interest in the event. It has been debated that the media and its agenda setting have become increasingly unidirectional: television news influences public concern and not vice versa (Behr & Iyengar, 1985). Regardless of the direction of public influence, the relationship between media coverage, social relevance and a story's public permeability is undeniable. More coverage of a specific issue is necessary to increase its social relevance. Saturating public opinions help overcome the challenges of the shorter attention span, as increased coverage of an issue forces the public to give the story more

attention because they are more exposed to it. More public attention also increases a story's impact: greater exposure leads to widespread public opinion that could feed bigger momentum for change and vice versa. This is why it is important that a leak stays relevant in the public sphere for as long as possible for the leak to be most meaningful.

With the shortening of the public attention span, media outlets have altered how they release information to maximize social relevance: changing the story's presentation depending on what the outlet thinks is most fitting to attract maximum attention from the public. Media agencies must combat turnover rates to ensure that stories do not get buried under the constant releases of new information. This relates back to Hamilton's idea that news coverage is ultimately an economic analysis because greater attention on an article could lead to greater profits.

HYPOTHESES

From the literature available, there are several emergent hypotheses about how technology affects the nature of leaks.

Hypothesis 1: Technology has increased the volume of leak coverage.

For each case study, total number of articles released by each media outlet will be compared.

Hypothesis 2: The distribution of coverage over time is unique to each medium of technology.

For a given leak:

i) Print media will see a slowly declining rate of coverage as time progresses.

ii) Television coverage will have sudden, inconsistent spikes throughout time.

iii) Online coverage will be steadier and more consistent throughout time.

The articles published will be sorted by the date of publication and followed over a 30-day period.

Hypothesis 3: Technology has expedited the leaking process.

The date the leaker accesses the source material and the date of the first published article will be compared.

Hypothesis 4: Technology has changed the overall lifecycle of leak coverage. Because news space is no longer finite, the coverage lasts longer at no extra cost. Alternatively, technology could have shortened the attention span of the public and consequently shortened the lifecycle of a leak: the leak disappears after maxing out public attention.

To prove this, articles about the leak within each medium will be followed for a year after the initial release to see how long the story stays relevant. For television, the search term will also be expanded to include all television broadcasts, such as special programs.

METHODOLOGY

The research will include a largely quantitative approach to analyze technology's effect on military information leaks. This method includes: comparisons of historical case studies that have involved leaks in military information and technology, dates of creation and number of stories about each leak across different mediums of technology. Information on the cases, such as source creation, technology used and leak release date came from various sources.

CASES

To observe historical trends and the changing media landscape, historical cases will be used to compare the influences of technology on leaks in military intelligence. Though the case studies chosen are not perfectly comparable, they have been chosen because they involve similar circumstances that allow for control between the analyses. All the cases involve a leak in military information that has been transferred using technology and then released to the mass public via

print, television and or the Internet. This will focus the observable implications to the influence of technology as opposed to the nature of the story and leaked material. Since the natures of the leaks are similar, variants in coverage should relate to changes in technology. The case studies are: The Pentagon Papers (1971), Iran-Contra (1986), Abu Ghraib (2004) and Afghan War Diary (Wikileaks, 2010).

When comparing the case studies, use of technology will become the independent variable, and distribution, market share and time the dependent variable. Data for the case studies will be gathered through academic literatures that have referenced the leaks. The articles released during these case studies will serve as units of analysis. Changes in the use of technology in information transfer[6] will also be discussed.

DATA COLLECTION

For each case study, background information was collected through literature and Internet research. Information collected included the technology used in information transfer and the date the documents were obtained by the leaker and first published by media outlets. Then under each case study, articles released by each medium of technology were explored. Print articles were collected through the Proquest Historical Newspapers Database and Factiva database. The terms used were "Pentagon Papers," "Iran-Contra," "Abu Ghraib" and "Afghan War Diary" because they were how the leaks were popularly labeled and referenced. 'Articles' included opinion and editorial pieces as well, as these further the spread of information to the public. These searches were repeated with the Vanderbilt Television Database to find instances where these leaks were mentioned on mainstream television networks. Articles were restricted to Evening News only, because of its role as a summary of the day's top stories. For the Internet, the same search terms

[6] Such as photocopying, USB disks and email

were used on Google search and website analysis. Articles covered stories published in the U.S. and refer to novel articles that are created on a specific day and made publically searchable through Google. It disregarded any archived article that has simply been reposted. The results of these searches were then documented for the date of initial story publication, the number of articles related to the story and the airtime of articles for videos.

Controls and restrictions were placed on the data collection process to further condense the data to provide meaningful results. The first control placed was that of scope. Since some of the leaks date back over 40 years and have continually had related articles released about them since, to make it comparable against more recent articles all the data collected will be restricted to the time frame of 30 days following the initial article. This eliminates any special coverage of the leak that will distort the analysis[7] and allow for a more concrete and meaningful snapshot of the situation immediately surrounding the leak. Whether policy impacts started within 30 days will also be taken into account.

Sources representing each medium of technology have been restricted for the purposes of the research. Within print media, only articles from *The New York Times*, *The Washington Post* and *The Wall Street Journal* were examined. For broadcast media, only segments from the evening news of NBC, ABC and CBS were examined. The narrowing of agencies will help retain consistency throughout the study. These media institutions represent some of the most credible and popular organizations in the U.S. that have covered all four case studies.

The newspapers chosen are generally regarded as the leading daily American newspapers (Project for Excellence in Journalism, 2011b). *The New York Times* is known for its general

[7] Such as the 40th anniversary celebrations of the leak of the Pentagon papers

reporting and international coverage. *The New York Times* records a circulation of 906,100 and 1,378,800 for their daily and Sunday newspapers and is the largest daily newspaper in the United States. It has been ranked as the paper with the greatest reach in accordance to the 2008-2009 U.S. Opinion Leaders Study (New York Times, 2010). *The Wall Street Journal*, known for its financial reporting, is recorded by the Audit Bureau of Circulations as the largest newspaper by average weekday circulation, recording a weekday circulation of 2.1 million as of September 30, 2011 (Wall Street Journal, 2011). *The Washington Post* is known for its emphasis on political reporting on the workings of The White House and the federal government. As of 2009, the Audit Bureau of Circulation recorded *The Washington Post* as the fifth largest newspaper in the United States, with weekday circulation of 582,244 (Audit Bureau of Circulations, 2009).

NBC, ABC and CBS represent major broadcast networks in the U.S. For most of U.S. television history, the 'Big Three[8]' have dominated US television, controlling up to 99 percent of television broadcasting in the 1940s (Hindman & Wiegand, 2008). With increasing competition, the 'Big Three' controlled an estimated 32 percent of the prime time market as of 2005 (McNeil, 1996). As of 2010, the NBC Nightly News was the highest rated broadcast news program in the United States (Carter, 2010).

For web-based articles, the lede[9] of each story was read for content assurance to make sure the article was about the scandal at hand.

[8] NBC, ABC and CBS
[9] The first sentence or paragraph of an article

CASE STUDIES

THE PENTAGON PAPERS

The Pentagon Papers was a top secret Department of Defense report chronicling the U.S.'s involvement in Vietnam from 1945 to 1967. Leaked by military analyst and contributor to the Papers Daniel Ellsberg and was published in *The New York Times* in 1971. The papers revealed that the U.S. government had misled the public regarding its intentions and goals in the war. After the initial publication, the government tried to suppress the publication of the papers, but was overruled by the Supreme Court. The information added to the growing unpopularity of the Vietnam War.

Ellsberg believed that Vietnam was a wrongful war and claims his main motive for releasing the Pentagon Papers was to reveal "patterns of official deception" and that President Nixon would follow in the footsteps of his predecessors in escalating the war (Ellsberg, 2003).

> "*I felt that as an American citizen, as a responsible citizen, I could no longer cooperate in concealing this information from the American public. I did this clearly at my own jeopardy, and I am prepared to answer to all the consequences of this decision."*
>
> - *Ellsberg on why he released the Pentagon Papers*

The case of the Pentagon Papers is a necessary and important starting point to the research as it is arguably the first major leak of military intelligence in modern history (Martin, 2003). The technology used to distribute the leaks would be, by today's standards, considered minimal. The Pentagon Papers was a 7,000-page document that had high costs of duplication and distribution: even *The New York Times* did not have the means to print the documents in their entirety, and the

documents were consequently used only as source material for the published articles. The physical nature of the documents, and its related costs, restricted the manner in which they could spread. Ellsberg leaked the story during his time working for Rand Corporation, by procuring copies of the Pentagon Papers after stealing the documents at night, photocopying them and returning them in the morning (Ellsberg, 2003). The papers were circulated manually, with Ellsberg giving out copies of the papers to newspapers personally with the help of friends and strangers in the antiwar movement. The distribution was halted when Ellsberg ran out of copies[10], and Ellsberg surrendered to arrest on 12 felony charges (Ellsberg, 2003).

When *The New York Times* received the documents from Ellsberg, they analyzed the document for over a month to verify their validity. Additionally, they sought legal advice from outside counsel: Lord, Day & Lord, on whether to publish the documents or not. Lord's advice to not publish the articles was overruled by the opinions of *The New York Times* counsel James Goodale, who argued that the press had the right to publish the significant information under the First Amendment (Correll, 2007).

The Pentagon Papers contained information that the media had failed to report such as the U.S government's amplifications of Vietnam War, the bombing of Laos and Cambodia, coastal raids on North Vietnam and Marine Corps attacks. It also revealed that four presidents from Harry Truman to Lyndon B. Johnson had knowingly lied to the public regarding the war's intentions. The papers showed the John F. Kennedy administration's plans to overthrow Ngo Dinh Diem[11], before his death and Johnson's decision to expand the war as well as plans to bomb North Vietnam against his promise to "seek no wider war" during his presidential campaign. It also

[10] And consequently could no longer continue leaking the information
[11] The leader of South Vietnam

contained memos detailing the reasons for American persistence in the war and documents detailing the deployment of combat troops on July 17 1965 by President Johnson, a week before he supposedly consulted his advisors.

The release of this information had immediate consequences. After *The New York Times* printed its third story, the government filed an injunction against further publication of the papers: the first print restraint in U.S. history. The government also indicted Ellsberg and Anthony J. Russo, an accomplice, on charges of espionage, theft and conspiracy that could sentence up to 115 years. Following this news, Ellsberg went into hiding but continued to release the papers to various newspapers (Ellsberg, 2003). As more agencies[12] began to publish the articles, The Supreme Court ruled against the injunctions claiming that the government lacked the burden of proof required for the injunction. The ruling of Times V. United States is lauded as an example of the use of the First Amendment that managed to not void the Espionage Act but also not allow the press unbounded freedom to publish classified documents. It was only when Ellsberg ran out of copies of the Papers that he turned himself in. He was released two years later on May 11 1973, because there was no U.S. law against leaking government documents. The judge also cited improper government conduct for the basis of his release. The full Pentagon Papers study, however, was only fully released on May 4 2011.

IRAN-CONTRA

The Iran-Contra affair began when Mehdi Hashemi, an Iranian militant, reported to a Lebanese newspaper, *Ash-Shiraa,* that the U.S., despite an arms embargo, was selling arms to Iran. The report also revealed a two-part scheme in which the U.S. was trading weapons with Iran to procure the release of American hostages and using the profits to fund Contra rebels fighting in

[12] A total of 17 agencies published stories, including *The New York Times* and *The Washington Post*

Nicaragua against the communist regime, which was banned under the Boland Amendment passed by congress. A number of hearings for various felonies followed, including those of National Security Advisor John Pointdexter, former Secretary of Defense Caspar Weinberger and Marine Lieutenant Colonel Oliver North, who had been in charge of the operation. However, President George H.W. Bush pardoned all those involved in 1992.

The scandal garnered heavy attention because it came after Congress[13] had passed the Boland Amendment that disallowed any government agency from providing military aid to the Contras from December 1983 to September 1985. It was revealed that the Reagan administration, led by Lt. Col. Oliver North, evaded legislation through the use of the National Security Council[14] to secretly provide military aid to the Contras using funds raised privately through the sale of weaponry to Iran, a country with hostile ties to the U.S.

The content of the initial leak revealed information about the arms deals between the U.S. and Iran. To this day, there is no conclusive evidence proving Reagan knew about the use of profits to support the Contras.

The leak about the secret transactions occurred in November 1986. After witnessing Robert McFarlane's secret trip to Iran, Medhi Hashemi, opposed to the Iranian government's transaction with the U.S., posted pamphlets on the news board at Tehran University's entrance (Baktiari, 1996). He also released the information to the *Ash-Shiraa*, which published the articles on November 3 1986. Though this claim was initially given little credit, further investigations revealed the U.S.'s involvement in Iran and the weapon transactions. Articles were first published in the U.S. through *The Wall Street Journal* on November 25 1986. Here, the main

[13] Which was Democratic-controlled during the Reagan administration
[14] Not explicitly covered by the Boland legislation

method of distribution was again print media and television. In comparison to the Pentagon Papers, print distribution had however become more efficient by the time the Iran-Contra leak was revealed. Though print media released the story first, it was the consistent role of television and its coverage of the high-profile trials resulting from the leak that made the issue such a high-profile event.

Again, there were immediate consequences following the leak of information for both Hashemi and the American government. Hashemi was arrested on charges of treason, tortured into confession and consequently tried in a Special Clerical Court[15] for charges of "sowing corruption on earth, inciting Fitna[16], succumbing to Satan and desecrating the martyrs of the Islamic Revolution." Hashemi was executed in 1987 before his verdict was reached (Louer, 2008). For the American government, this damaged the public's trust in the government. North was fired and charged with felonious convictions. Public attention on North was exacerbated when it was revealed that he had tried to destroy and hide evidence that would incriminate him (Walsh, 1993). McFarlane and Pointdexter were also convicted on criminal charges, but Pointdexter and North were given immunity. In 1991, CIA officials and former State Department officials plead guilty to charges on hiding information about the Contra, and the charges were then placed on President Ronald Reagan the following year. The scandal highlighted the congressional oversight of American foreign affairs and the executive branch's limits of power.

ABU GHRAIB

In early 2004, accounts began to surface that prisoners in the Abu Ghraib military prison in Iraq were tortured and abused by their American captors. But it was not until April, when both a *60 Minutes II* news report and an article in *The New Yorker* by investigative journalist Seymour

[15] An Iranian court system for examining transgressions within the clerical establishment
[16] Fitna is an Arabic word with connotations of chaos, upheaval and succession

Hersh featured leaked photographs depicting graphic instances of abuse, that public uproar began. Ultimately, 11 soldiers were convicted on charges stemming from the incidents captured in the photos, with some receiving sentences of up to 10 years.

The full content of the abuses at Abu Ghraib are held by the government and have yet to be released. A CID investigation reported that there were "1,325 images of suspected detainee abuse, 93 video files of suspected detainee abuse, 660 images of adult pornography, 546 images of suspected dead Iraqi detainees, 29 images of soldiers in simulated sexual acts, 20 images of a soldier with a Swastika drawn between his eyes, 37 images of Military Working dogs being used in abuse of detainees and 125 images of questionable acts" (Seigmund, 2004).

The photos were leaked by Joe Darby, a prison employee, by accident when prison guard Charles Graner, who initiated the abuses, unknowingly gave two CDs containing the photos of the abuse to Darby. Shocked, and morally conflicted, Darby turned in copies of the CDs to Special Agent Tyler Pieron of the U.S. Army Criminal Investigation Command and requested anonymity in fear for his safety (Sharrock, 2008). This launched a series of investigations into the prison, and ultimately, it was the uncle of Sergeant Ivan Frederick, another abuser of the prisoners, William Lawson who emailed documentations of the abuses to retired Colonel David Hackworth, Bill O'Reilly, the Red Cross and Congress. It was Hackworth that put Lawson in touch with the producers of the CBS news program *60 minutes II* who eventually broke the story on the abuses at Abu Ghraib (History Commons, 2008).

The release of the images on CBS's *60 minutes II* on April 28 2004 created uproar amongst the public. This was further exacerbated when Seymour Hersh further explored the story in *The New Yorker* magazine published online on the April 30 2004 and in print May 10 2004. The public

was shocked that American soldiers had been abusing their power and led to increased criticism on a war that was already viewed negatively. President Bush publically condemned the events that occurred in the prison. Darby managed to avoid attention from the media, but when it was revealed that he was behind the leak[17], he was threatened and criticized by his troop and his community (Rosin, 2004). It is also speculated that the release of information prompted a retributive insurgent attack on the prison on April 20 2004, in which 22 detainees were killed and 92 wounded (Associated Press, 2004).

The reserve soldiers from the 320th military battalion, under the Uniform Code of Military Justice were charged with prisoner abuse, and in May, a prisoner-release policy was initiated by the U.S.-led coalition to reduce the number of prisoners to less than 2,000, which has yet to be realized. Though President Bush attempted to demolish the prison, his request was denied under U.S. military judge Col. James Pohl as the prison was deemed a crime scene. Seventeen soldiers and officers were removed from duty by the Department of Defense and 11 were charged with battery, aggravated assault, maltreatment and dereliction of duty. The 11 soldiers were convicted, dishonorably discharged and sentenced to military prisons. Most notably, Specialist Charles Graner and his fiancée Specialist Lynndie England were sentenced to 10 and 3 years in prison respectively. The leak raised human rights concerns throughout the Afghan War, and was in part the reason that the United States Army activated the 201st Military Intelligence Battalion[18] on April 12 2006. It has also led to the review and re-endorsement of the United Nation's Convention Against Torture and the Third[19] and Fourth[20] Geneva Conventions by the U.S.

[17] In a speech by Donald Rumsfeld
[18] The first of four joint interrogation battalions
[19] Defines humanitarian protections for prisoners of war
[20] Defines humanitarian protections for civilians in a war zone, and outlaws the practice of total war

THE AFGHAN WAR DIARY

The Afghan War Diary has been called the Pentagon Papers of the new millennium. It was the first documented case involving the website Wikileaks and brought the issue of intelligence leaks back into the public sphere in recent memory. On July 25 2010, Wikileaks disclosed a collection of internal U.S. military logs of the War in Afghanistan. The log includes 91,731 documents that covered the war between January 2004 and December 2009. In addition to its website, the logs were made public via *The New York Times*, *The Guardian*, and *Der Spiegel*.

The leak is considered to be the greatest leak in U.S. military history, detailing civilian death tolls, increasing Taliban hostility and Pakistani and Iranian involvement in the insurgency (Leigh, Harding, Booth, & Arthur, 2011). Like the release of the Pentagon Papers, it painted a devastating portrait of a failing war and revealed governmental errors throughout the process.

The 91,731 documents, written by American soldiers and officials, span 200,000 pages. The war logs detail summaries of executions and war crimes, tortures, U.S. field reports and civilian deaths. The logs highlight how authorities ignored and covered up hundreds of reports of torture, abuse, rape and murder by Iraqi police and soldiers and prisoner abuse for years after the Abu Ghraib scandal. The diary also revealed operations of Task Force 373[21] and the increasing use of Reaper and Predator drones[22] to attack civilian areas. It also revealed the corruption and violence of local warlords, drug dealers and leaders of the Afghan state.

Bradley Manning, a soldier who was assigned to the 10th Mountain Division near Baghdad, transferred the classified information in October 2009. He used his access to the Secret Internet Protocol Router Network and transferred classified data onto his personal computer. Manning

[21] Task Force 373 was a secret special operations troop charged with hunting down leaders of the Taliban and Al Qaeda and murdered 2,000 individuals the Pentagon and CIA sentenced to death without being charged.
[22] Unmanned aircraft that attack from 50,000 feet.

consequently leaked the information pertaining to the Afghan War and U.S. diplomatic cables to Julian Assange, the founder of Wikileaks, whom he had allegedly met in an Internet chat room, in November 2009 (Leigh, et al., 2011).

Through the Internet chat room, Manning claimed that he used the "satellite internet connection" and had "free reign over classified networks for long periods of time…not on some server stored in a dark room in Washington D.C." He went onto claim that he knew "someone", who has been "penetrating U.S. classified networks, mining data… and been transferring that data from the classified networks over the "air gap" onto a commercial network computer…sorting the data, compressing it, encrypting it and uploading it" and passed on the data to Julian Assange. To transfer the data, Manning erased CD-RWs containing Lady Gaga songs and downloaded the documents by writing over the CDs' original content (Leigh, et al., 2011).

Again, the leak was met with increased international criticism of the American government and of the war. However, unlike the aftermath of Abu Ghraib, the Obama White House responded by vowing to continue the War in Afghanistan, threatened Wikileaks and claimed that the exposure of classified material had endangered national security and troops deployed abroad (Preston, 2010).

Manning was arrested in Kuwait and was charged under the Uniform Code of Military Justice for violations of "transferring classified data onto his personal computer and adding unauthorized software to a classified computer system in connection with the leaking of a video of a helicopter attack in 2007" and "communicating, transmitting and delivering national defense information to an unauthorized source and disclosing classified information concerning the national defense

with reason to believe that the information could cause injury to the United States". Manning was also listed in the Twitter subpoena[23] on December 14 2010.

Manning was charged with 22 additional claims on March 1 2011, including "wrongfully obtaining classified material for the purpose of posting it on the Internet, knowing that the information would be accessed by the enemy, the illegal transmission of defense information, fraud and aiding the enemy." New charge sheets now include his involvement in the Iraq War logs in addition to the Afghan War Diary, a quarter of a million State department cables, 380,000 records about Iraq and 90,000 about Afghanistan. Manning faced life imprisonment, dishonorable discharge and reduction in rank.

Unlike coverage of other leaks, articles on Wikileaks focused more on the legitimacy of the leak source rather than the nature of the content. In earlier cases, Senators were willing to hold the government accountable for their actions as the press consistently asked for more information. However, in the case of Wikileaks, *The New York Times* persuaded Wikileaks to self-censor and get White House approval. Ultimately, Wikileaks released the information on its own, without the backing of a powerful media agency (Assange, 2011).

The comparison of the case studies, with a focus on the progression of technology throughout history, beginning with the Pentagon Papers and its use of print journalism and ending with Wikileaks with its heavy reliance on the Internet to distribute information, allow for an observation of how technology, leaking mechanisms and policy have changed throughout history.

[23] The U.S. Department of Justice attempted to access the Twitter accounts of those involved with those involved in leaking confidential information.

As the leaked information in each case study became highly publicized, they were heavily involved in the policy changes that followed. The Pentagon Papers exposed a failing war and how the government had actively deceived the public. The leak sparked debate over the public's 'need to know' and the government's desire to protect information. The Supreme Court ruling to uphold the First Amendment enabled the possibility for future leaks. The Iran-Contra scandal revealed the involvement of top governmental officials in an illegal scheme that even led to the accusations towards President Reagan. The scandal affected the way future Congresses interacted with foreign policy and encouraged a more critical view on the executive branch. The photographs from Abu Ghraib disclosed the misdeeds of a handful of soldiers and highlighted the frailty of legislation regarding the treatment of detainees. The information played a key role in the policy changes that occurred in regards to American torture policies and led to efforts to encourage better observance and enforcement of human rights within the Afghan War. The uncovering of government documents, military tactics and death tolls in the Afghan War Diary increased public engagement with the war. It also affected the way President Obama referred to the war and increased full disclosures of military tactics and their results.

Data Analysis

With each case study, the primary data collected is the articles released via each source during the 30 days after initial publication. With this data, the dates of each release will be recorded and the word count will be extrapolated. The data can then be manipulated to test the hypotheses.

Observable Implications

To validate the hypotheses, a number of implications must be reflected and observed in the data.

For Hypothesis 1, the total number of stories released shall increase throughout time, as new technology is introduced.

For Hypothesis 2, a graph comparing coverage[24] for 30 days since the initial article for each outlet shall prove the distinct hypothesis for each media outlet.

For Hypothesis 3, dates will show a decrease between the day the leaker obtained the data and the first day of publication.

For Hypothesis 4, a comparing the coverage for each outlet for a year following the initial publication shall show patterns in coverage throughout time.

LIMITATIONS

Due to constraints of time and manpower, there are limitations to the research. The limitation of using case studies is that there is no strict method of control in the size and scope of the scandal. Because scope is not quantitative, there is no control variable to which results can be compared. However, as aforementioned, the wide spectrum of the case studies and the restrictions that have been imposed on the data collection should mitigate these differences in scope. Moreover, the role of inter-media coverage[25] has been disregarded for the case of this study. With the growth of new media, this is a burgeoning field in today's market. However, to maintain a consistency within the analysis, especially as historical newspapers are being used, the intervening variable of inter-media coverage has been disregarded. For the data concerning the Internet, articles that were published on *The New York Times*, *The Washington Post* and *The Wall Street Journal* websites have been disregarded.

Moreover, the data will not be able to conclusively portray the entire media landscape as the source of technology researched is narrowed down to print, television and the Internet. Sources

[24] Number of articles released per day
[25] Inter-media coverage refers to articles that have been released through multiple media outlets. Such as: articles that have been published both in print and online, or multimedia clips that are shown on television that are also posted online

such as radio and cable television have been disregarded for the study, and their omission means that the media market cannot be portrayed fully. Even with these limitations, the data presented will show a holistic picture that proves the aforementioned hypotheses without compromising the results.

RESULTS AND ANALYSIS

HYPOTHESIS 1:

Technology has increased the volume of leak coverage

To test this hypothesis, the aggregate volume of leaks must be measured and compared throughout the case studies. The graph below shows the number of articles published; defined as a unique article (print), a segment on the evening news (television) and a new webpage created (web), for each case study across each media outlet.

Figure 1: Aggregate coverage of leaks arranged by case study

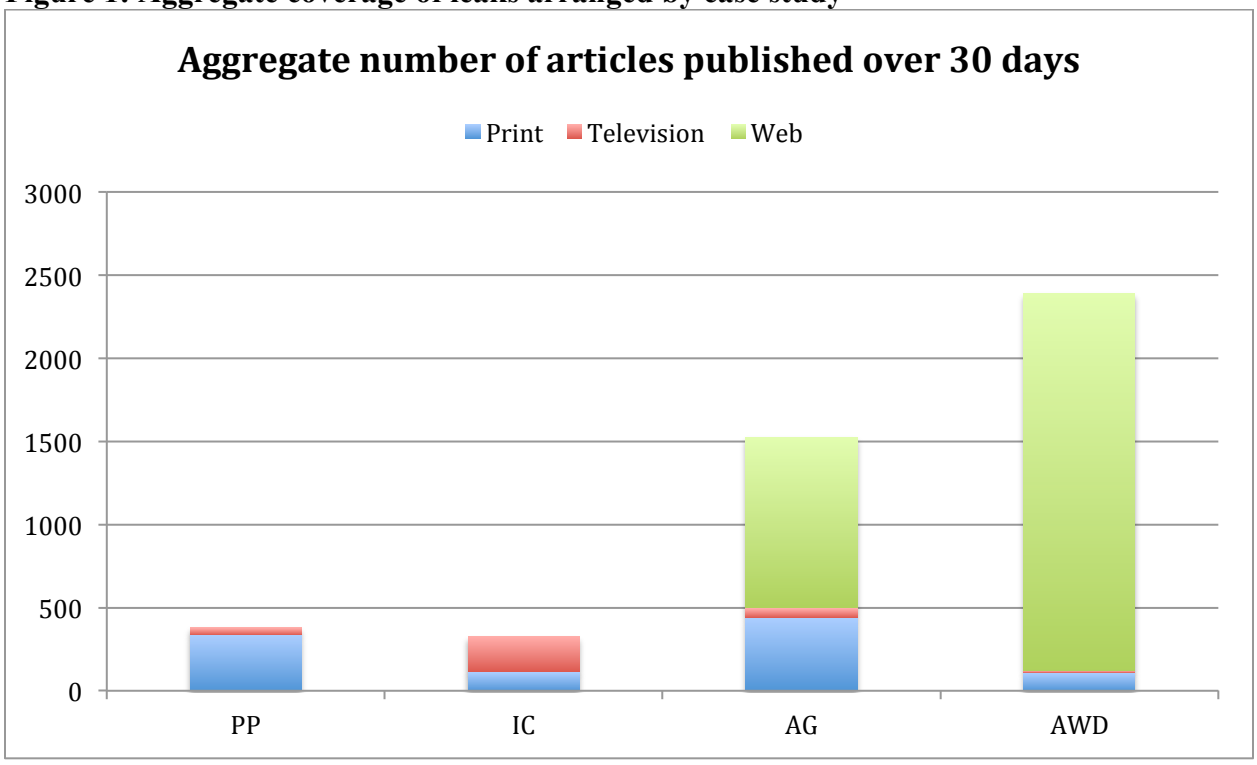


Figure 1 proves that the hypothesis is correct. It shows that the increasing use of technology, from two mediums to three[26], has increased the sheer volume of data that has been published. Assuming that technology has developed and become more prevalent with time, this graph conclusively shows that increasing technology has led to the release of more articles. There is a significant increase in the number of articles relased about Abu Ghraib and the Afghan War Diary, mostly due to the use of the web, than the Pentagon Papers and Iran-Contra.

The volume represented in Figure 1 is purely to do with the amount of information that has been released to the public. It measures the volume of content each media source has been able to release to the public. This is not referencing the impact of the articles released by each outlet because an article released by *The New York Times* is viewed much more than one post on a random website.

The argument that the sheer volume of information available to the public has increased with each technology can be confirmed when the data is rearranged by technology and not by case study as shown in Figure 2.

[26] With the inclusion of the web in the latter case studies

Figure 2: Aggregate coverage of case studies arranged by media outlet

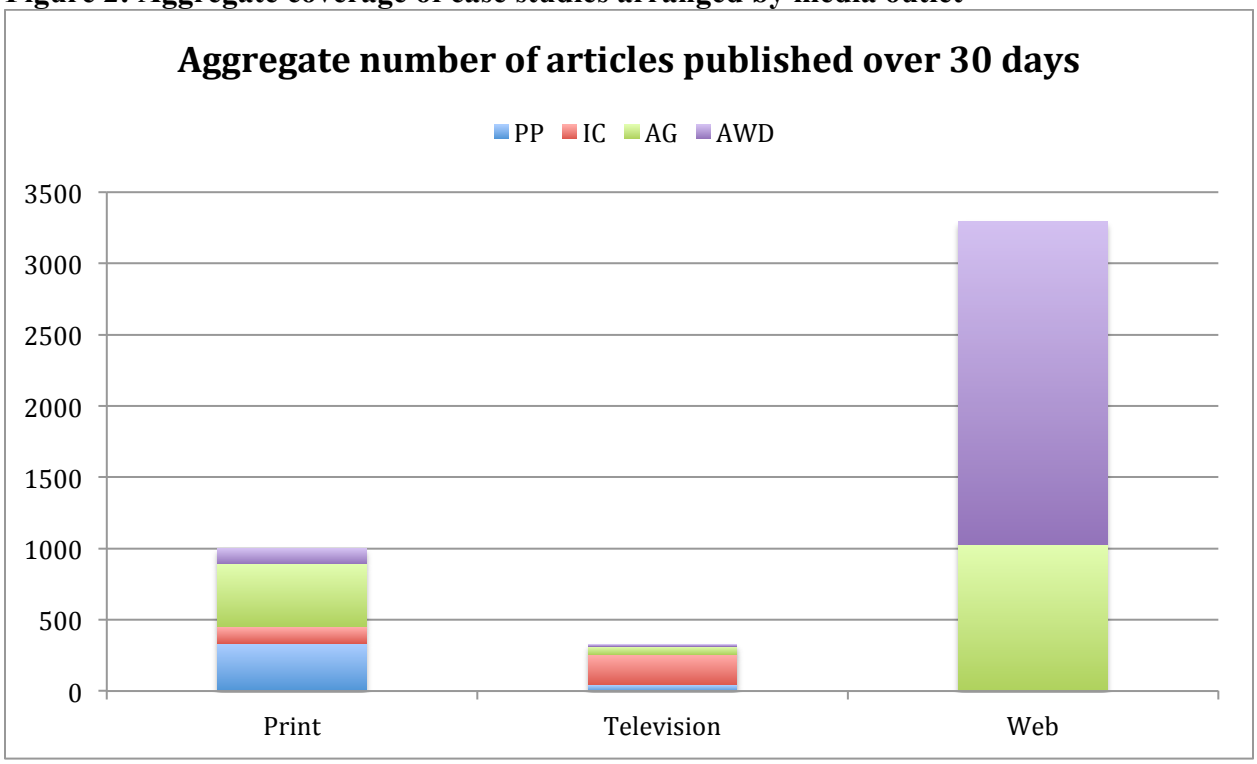


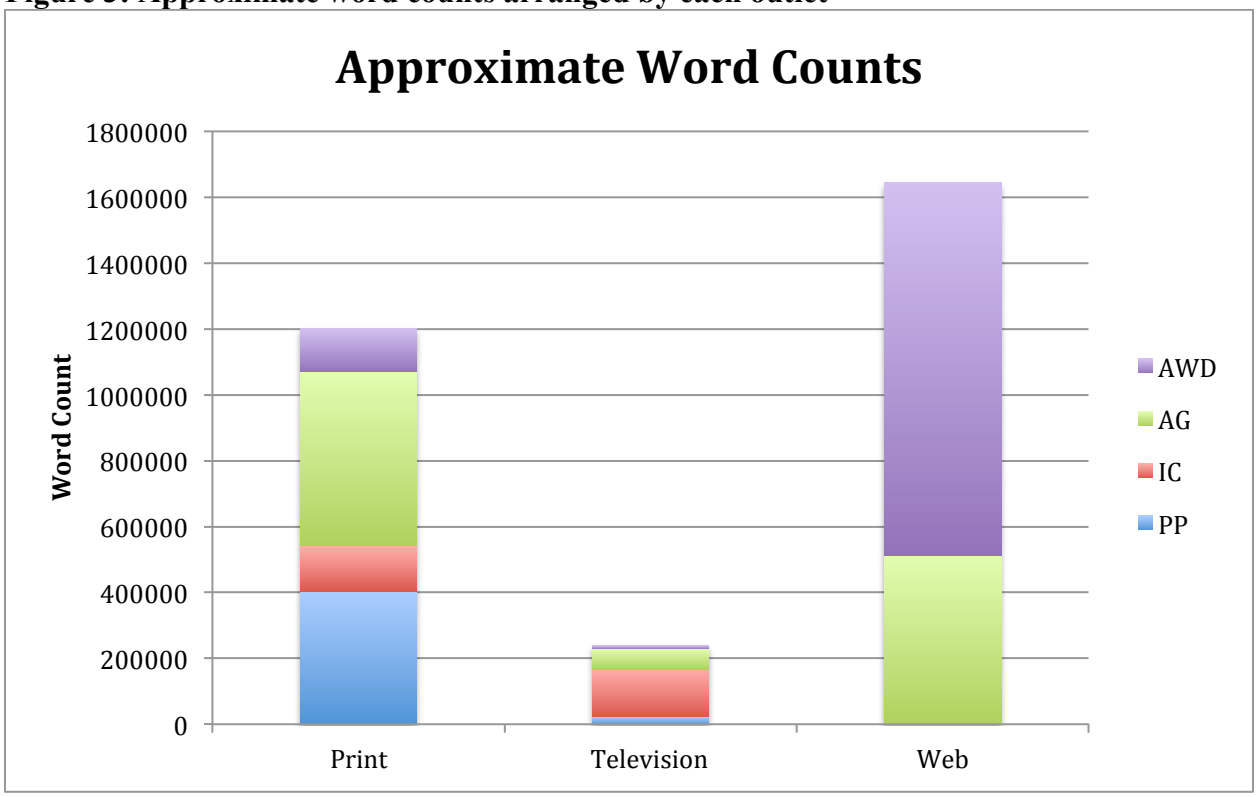
Figure 2 shows an aggregate of the articles leaked by each media source. The Internet is the most active, proving that improvements in technology have increased the volume of information released to the public. The number of articles released through the Internet regarding Abu Ghraib alone is greater than the print coverage of all the case studies combined: showing the ability of the Internet to distribute vast amounts of data compared to print and television. It is interesting to note that television, which until this point had been described as a more advanced form of technology than print, appears to be the least active in the number of articles released. This could be explained by the constraints of the outlets: though print media is constrained by physical space on the paper, this can be easily increased and the virtual space used by the Internet is basically infinite. Television is constrained by the 24 hours of the day, which cannot be expanded or altered. This could explain why there is a smaller showing for the number of segments released through television.

But this does not conclusively prove that television released less information than the other media outlets. A transcript of one "article" on a network news program could cover 75 percent of the front page of a newspaper. Thus assuming that news broadcasts are read at a pace of 180 words per minute (Ricketson, 2004), the amount of content released through television can be compared to the content released through print, in which an average article is about 1,200 words (Project for Excellence in Journalism, 2011a), and the web, which has an average article of about 500 words. Through this method, an estimated amount of content that has been released to the public can be assessed.

TABLE 1: WORD COUNTS

	PP	IC	AG	AWD
Print				
Total articles	337	114	441	110
Approx. word count	404400	136800	529200	132000
Television				
Total minutes	135.83	795.33	346.33	56.82
Approx. word count	24449.4	143159.4	62339.4	10227.6
Web				
Total articles			1027	2265
Approx. word count			513500	1132500

Figure 3: Approximate word counts arranged by each outlet



Even after the calculations are made, Figure 3 shows the same results as Figure 2. It is interesting to note that with our new rubric, the amount of coverage in print and online seem more similar than previously assumed.

Again, it is important to note that the data does not indicate how many people consumed an article. This method hypothetically equates one article, read by the entire print readership, with one post on a website, which is likely to have less views. Additionally, print and broadcast articles are usually differentiated by presentation of new information. Articles on the Internet could be unique but contain the same information as another article. With this in mind, though the data can conclusively prove that technology has increased the sheer amount of articles that are released, this does not directly translate to how the public has receieved and consumed the information.

Furthermore, it is interesting to see how this data can be broken down to demonstrate the changing role of each form of technology in the release of information between the case studies.

Figure 4: Volume of Coverage for leaks

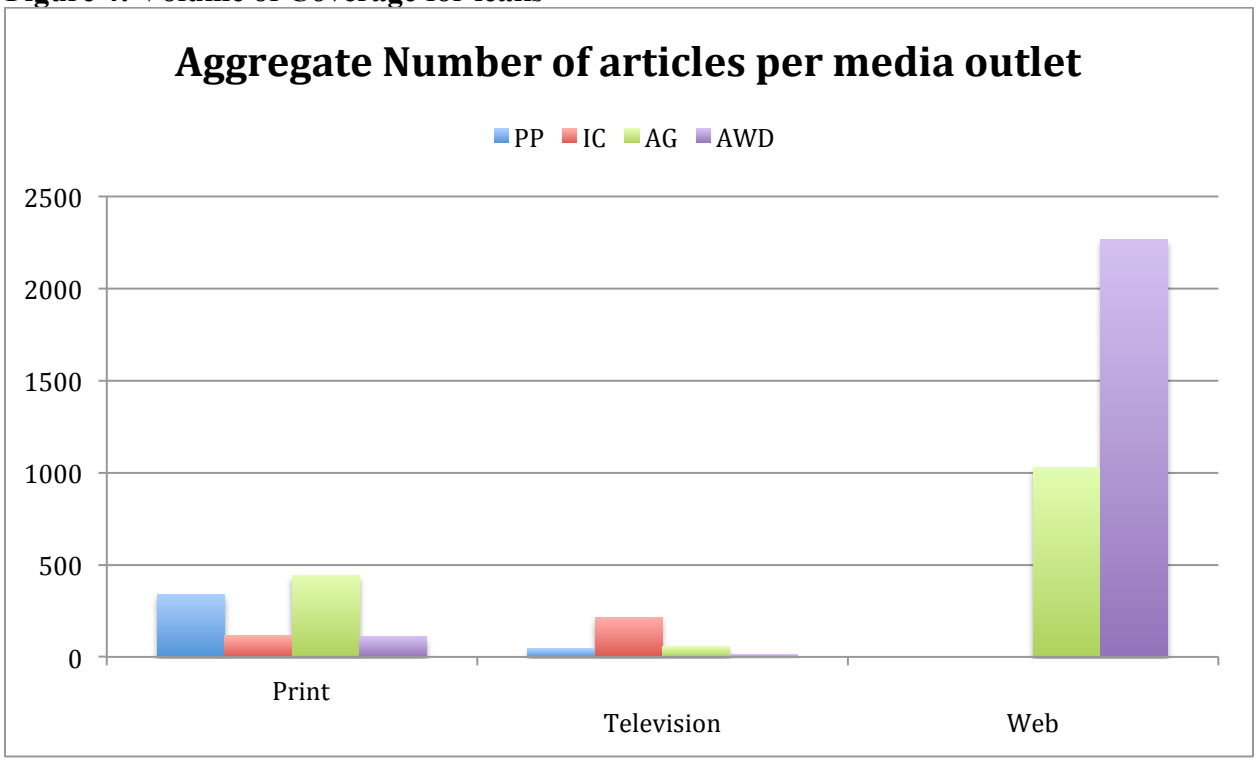


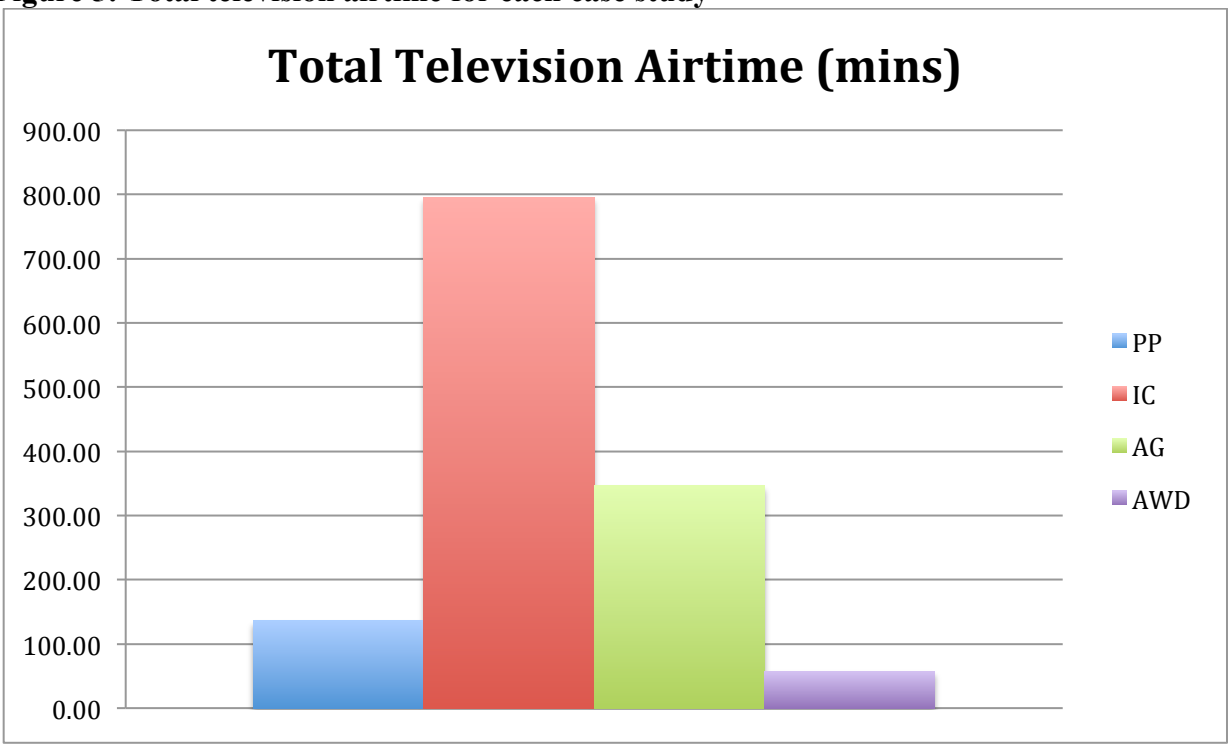
Figure 4 provides an interesting perspective on the hypothesis. Still applying the assumption that technology used for publishing articles, even within each medium of release, has improved with time, the only medium of release that now holds true to the hypothesis is the Internet.

Television again is an interesting anomaly. After the initial increase in articles from the Pentagon Papers to Iran-Contra, the number of articles released by television has declined with each consequent case study. This could be because the increase in technology has allowed for growing coverage of not only leaks but of other news. More so, the space for network evening news has been declining from 22 minutes to 18 minutes (Hamilton, 2004). This decrease in news coverage can be attributed to the decrease in news bureaus' prevalence and size (Hamilton, 2004). Additionally, drawing conclusions from the number of stories or minutes within these

broadcasts, assume that the leaks are equal in importance, which is not the case. The decrease in coverage from Iran-Contra to Abu Ghraib could be due to the scope of the event. The Iran-Contra scandal revolved around the decision of the President and his advisors and the Abu Ghraib scandal was the result of soldiers' actions. Subsequently, the decrease in coverage could be related to the profile of the actors involved in the scandals and the demand for news involving the associated actors. The higher coverage of the Iran-Contra scandal could be a response to the public's higher demand for news. This higher demand could be because television was a prime source of information during the 1980s, as opposed to the multiple sources such as cable and Internet that were available in later scandals.

To explore this further, the release of information through television will be looked at in closer detail and analyzed in terms of total content - in minutes- released by television.

Figure 5: Total television airtime for each case study



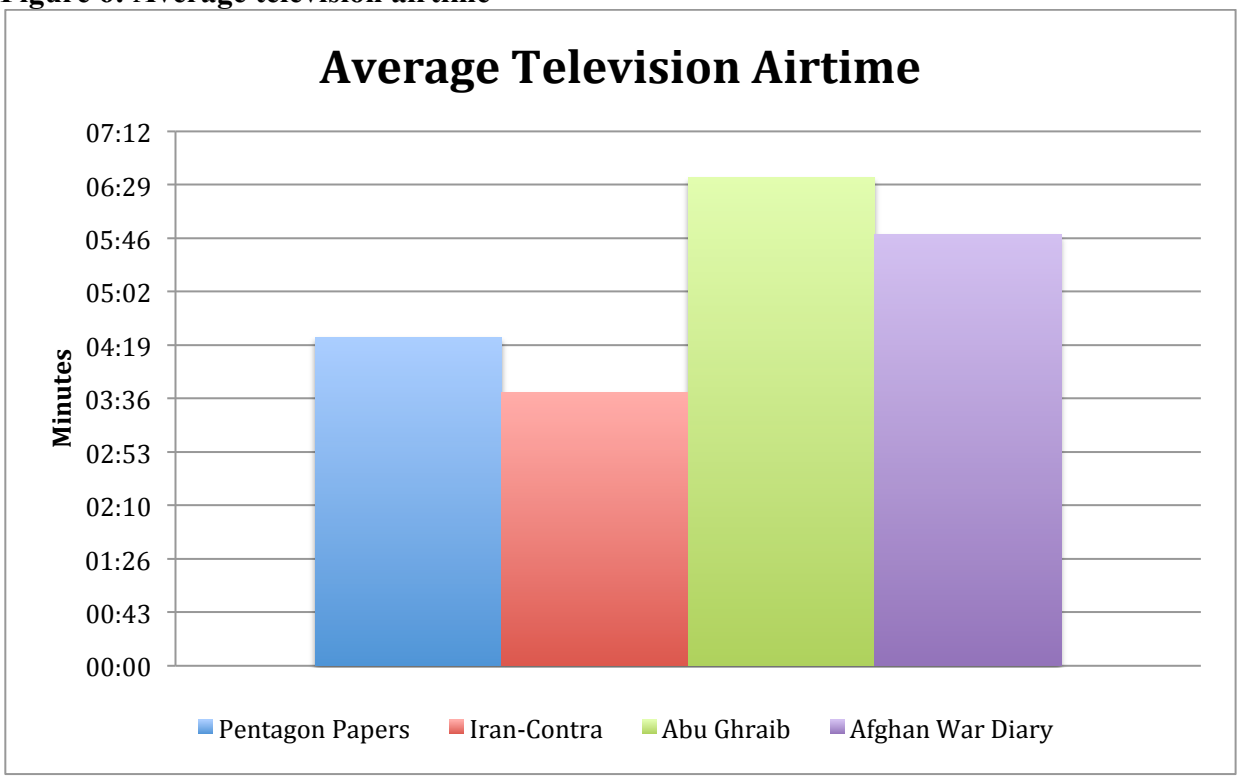
The trend in Figure 5, replicates the trend for the number of articles released by television as shown in Figure 4. With knowledge that television is restricted by the 24-hour airspace, Figure 5 above highlights the transformation of television[27] as a news source.

The initial increase in airtime[28] from the Pentagon Papers to Iran-Contra can be attributed to technological development. The increased reliance on television as a news source, as the number of television sets in homes increased, could have led to the greater coverage of Iran-Contra. What is more interesting is the reason why television airtime has declined since Iran-Contra. One explanation can be the introduction of cable television. With cable television saturating the finite market space, and with specific channels such as CNBC and CSPAN solely dedicated to news information, major broadcast networks have reduced the airtime dedicated to news features, distilling the information down as much as possible. As for the time allocated to evening news programs, the shifting focus towards profits have led to the shrinking of news space. This has increased advertising and promotional clips within news coverage, reducing time spent on news reporting. A comparison of time allocated to news coverage in the 1981 and 2000 editions of CBS Evening News by Downie and Kaiser showed that news coverage had decreased from 23.20 minutes in 1981 to 19.20 minutes in 2000 (Hamilton, 2004).

Additionally, broadcasting agencies now understand that viewers who want more information and depth will refer to news-only cable channels and Internet streaming. The emergence of other media outlets, and the increasing constraints on network news, could explain why airtime dedicated to releasing information about the case studies have decreased in the past decade.

[27] Constrained to the Evening news of the 3 networks: 30 minutes per show
[28] Airtime data only includes evening news and not special coverage

Figure 6: Average television airtime



It is interesting to note that the average time per segment[29] has actually increased since coverage of Iran-Contra. This could again be attributed to the scarcity of airtime. In the 1980s, it might have been possible to have shorter segments spread out, now networks produce less segments about a specific issue but package them to tell the entire story succinctly. Technological change has spurred a shift in the paradigm in which news reports are presented: though news programs have shortened, stories in news broadcasts have lengthened. The growing role of cable news outlets has decreased the need for evening news to cover all headline news and allowed networks to provide stories with more context and background (Hamilton, 2004).

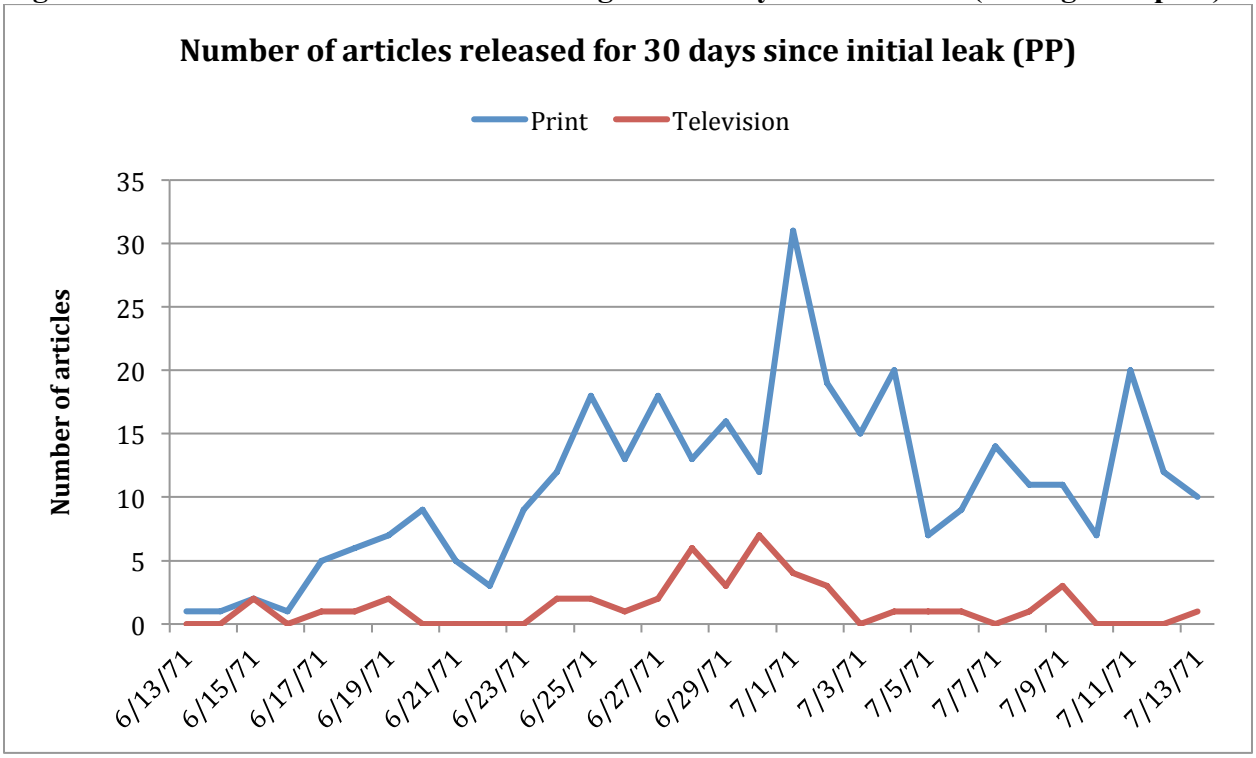
[29] A segment is defined to be a portion of the news that covers one specific story or event. The content of these segments should be able to stand alone when taken out from the evening news broadcast. An example would be a pre-recorded and packaged video clip or coverage from an on-site reporter.

HYPOTHESIS 2:

The distribution of coverage over time is unique to each medium of technology

To test this hypothesis, the number of articles released each day after the initial breaking of the story by each outlet was charted against the others to observe if there were any patterns in the way each outlet released data or whether they affected one another.

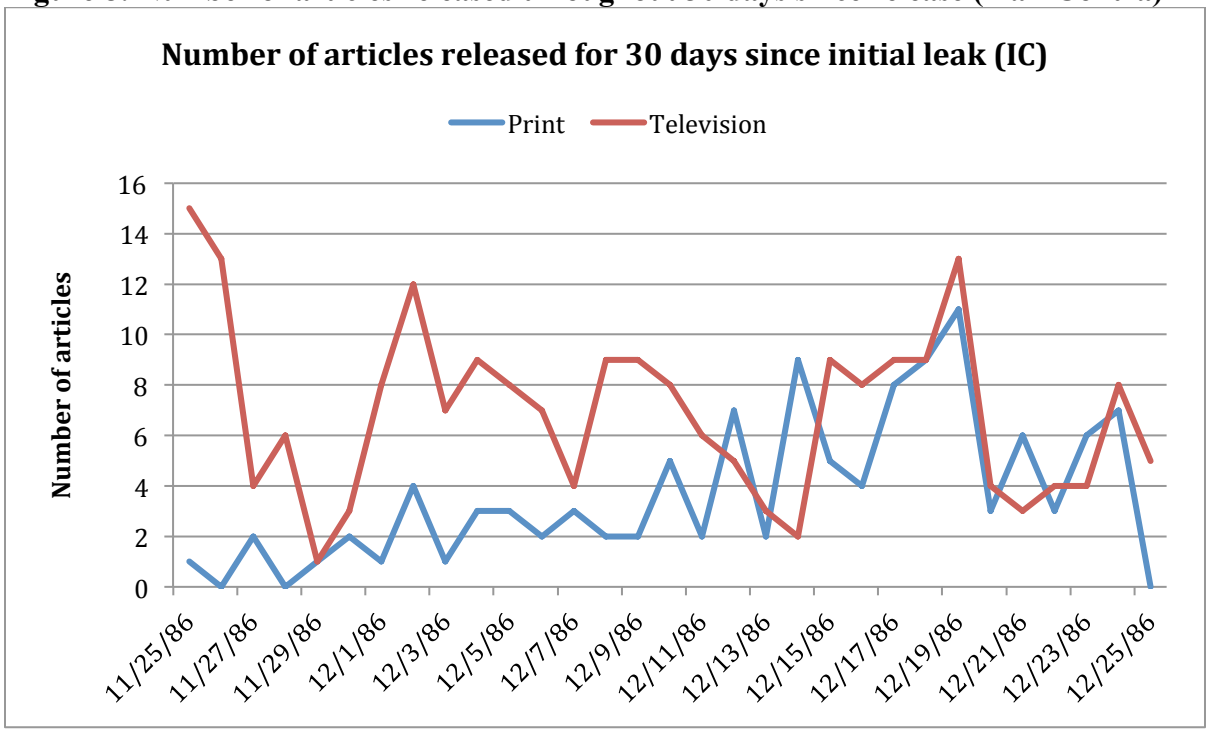
Figure 7: Number of articles released throughout 30 days since release (Pentagon Papers)



In the case of the Pentagon Papers, the distributions that were hypothesized - that print media will see a slowly declining rate of coverage as time progresses and television coverage will have inconsistent spikes throughout time - are not the case. In fact, it appears to be quite the opposite with spikes in coverage appearing in print media with more consistent coverage throughout television. It is also interesting to note that print has a significant dominance over television coverage of the event. Observing the spikes in coverage between the two mediums, it appears that peaks in television coverage follow those of print coverage, such as periods around the 12th –

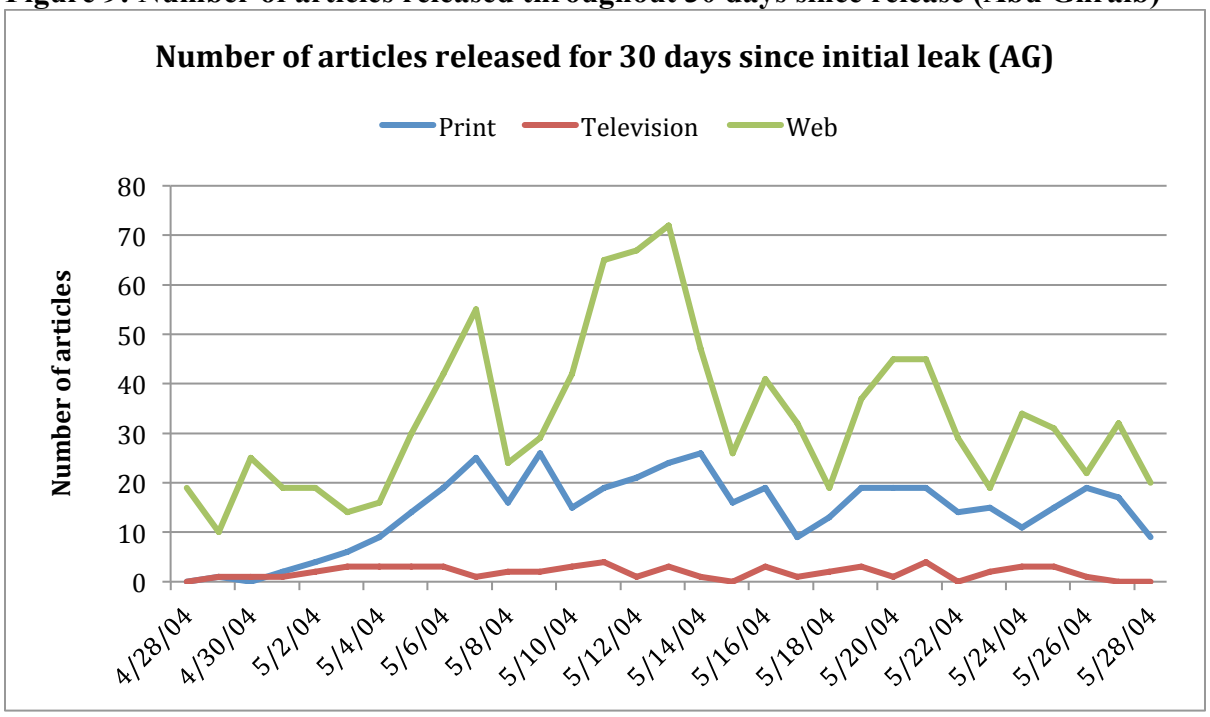
19th day. It can therefore be concluded that coverage in network news is driven by advances in stories by newspapers, which is true for the case of the Pentagon Papers because Ellsberg leaked the stories to major newspaper agencies and not broadcasting networks.

Figure 8: Number of articles released throughout 30 days since release (Iran-Contra)



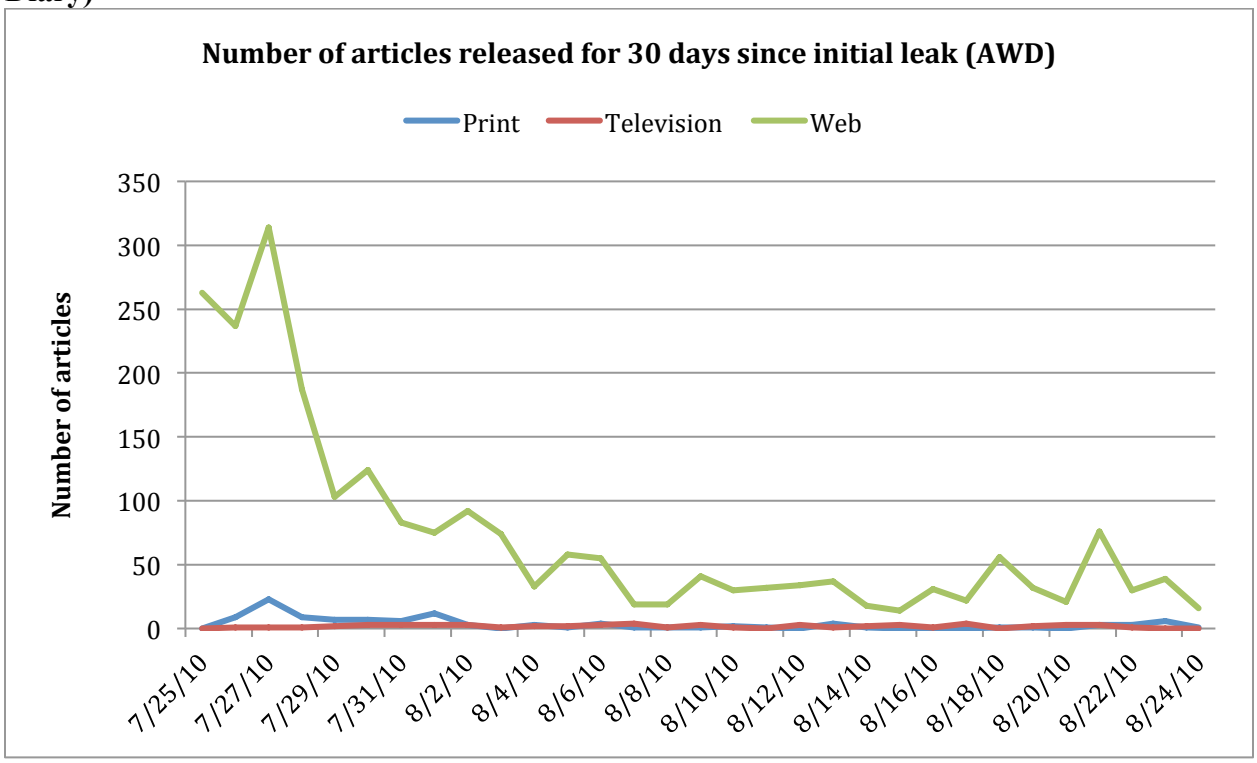
In the case of Iran-Contra, the distributions are closer to those that were hypothesized. Television coverage is varied, with surges in coverage on the 1st, 7th, 13th, 23rd, 29th days, that could be related to the release of new information. Although print media sees small rises and falls, it has steady coverage that gradually increases throughout the period of 30 days. It is important to note that in contrast to the Pentagon Papers, television coverage has outdone print coverage. The lag between the two mediums also seems less obvious; the two lines only closely resemble each other around the 20th day till the 25th day.

Figure 9: Number of articles released throughout 30 days since release (Abu Ghraib)



The distribution of coverage of Abu Ghraib does not match predictions. As expected, web coverage is consistently greater than the other two mediums of release, but then there is a lot more variation than predicted. The mediums show a similar pattern of coverage, as they all increase in coverage until the 8th day, where the coverage remains relatively stable throughout. Here, print media has again surpassed television coverage, but this could be due to the aforementioned restriction of market space that is placed on television airtime.

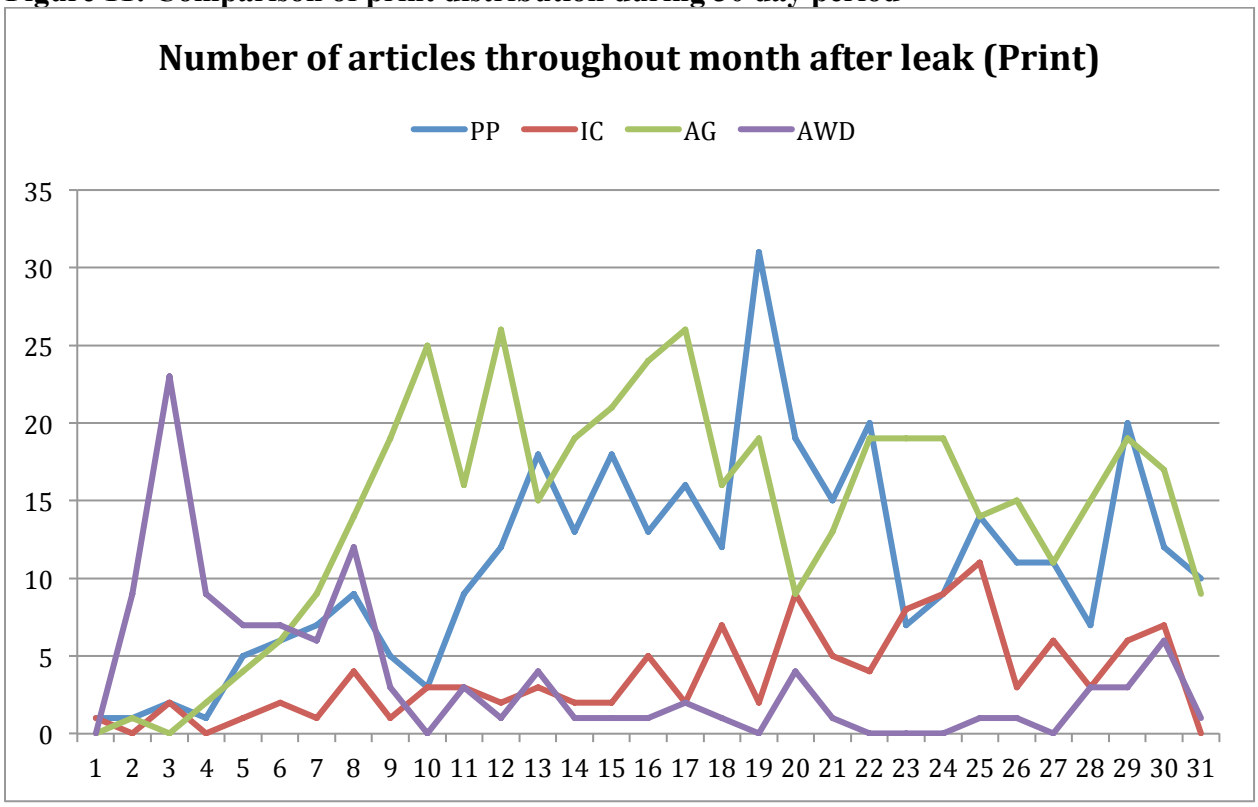
Figure 10: Number of articles released throughout 30 days since release (Afghan War Diary)



The pattern of coverage of the Afghan War Diary seems to be an anomaly. It, however, is the case study in which the three mediums most closely resemble one another. This could be a testament to the increased interconnectivity of the media network or the increased usage of wire services throughout news agencies. All three outlets show an early spike in coverage that dies down shortly thereafter, staying constant through the rest of the period: this does not align with the aforementioned hypothesis. A plausible explanation for this trend could be related to the percentage of the full story that is revealed to the public. Unlike the other case studies, Wikileaks, with the help of the Internet, was able to release the entire batch of information that it had in one blast, which could explain the rapid surge in articles during the first 5 days. Because the public had seen all the information after the initial 5-day period, there was no need to continue coverage and waste precious space in print or on the air. This is shown through the periods where there is no print or television coverage: a first within the case studies.

Furthermore, to analyze general trends throughout the case studies, the data has been reorganized by medium of publication to observe whether there are trends that could prove Hypothesis 2.

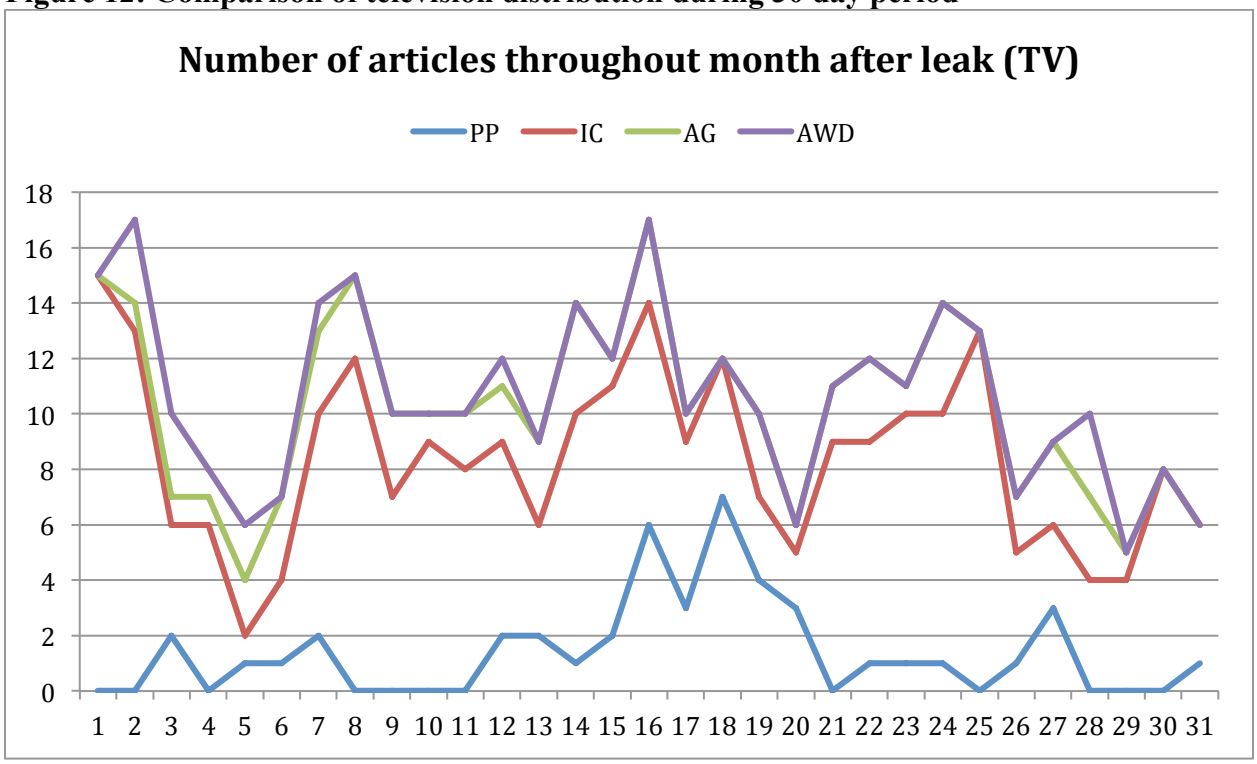
Figure 11: Comparison of print distribution during 30 day period



It appears that the hypothesis that print media will see a slowly declining rate of coverage throughout time is not the case. In fact, print coverage does not seem to have a general trend at all. The developments in Internet technology could possibly have led to a shift in the spread of coverage. The Pentagon Papers, Iran-Contra and Abu Ghraib case studies all have a slow build up of stories throughout the initial 10 days and maintain that level of coverage. Coverage for the Afghan War Diary peaks early but then quickly fades. The inconsistent patterns display that print coverage depends on what is being covered and the 'value[30]' of the controversy.

[30] Defined in the economic value of news described by Hamilton: viewership that can lead to more advertisers, and consequently more profit.

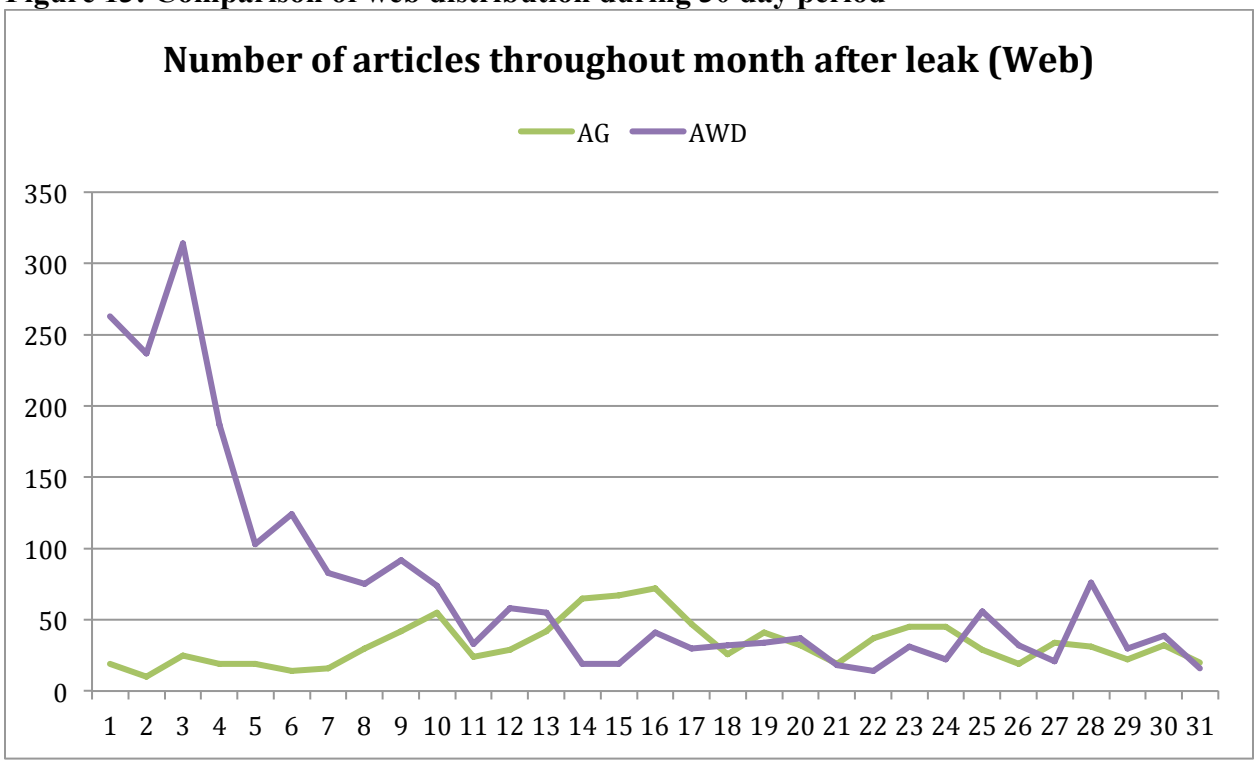
Figure 12: Comparison of television distribution during 30 day period



In contrast to print articles, television coverage relates better to the aforementioned hypothesis and show sudden inconsistent spikes over time. Each case study shows a steady stream of coverage with random surges in coverage, which could be due to sudden developments in the scandal that needs to be reported.

It is interesting to note, that the latter three case studies follow a very similar pattern of coverage. There could be a possibility that modern coverage of events has fallen into a pattern that requires more information to prove.

Figure 13: Comparison of web distribution during 30 day period



Only the content distribution for Abu Ghraib fit the hypothesis for Internet coverage: it remains somewhat consistent throughout the 30-day period. The coverage for the Afghan War Diary is an anomaly that peaks quickly then diminishes.

Having analyzed the case studies in terms of the distribution through each media outlet, there is not enough evidence to conclude that the hypothesis is correct. The evidence is inconclusive at best because the trends predicted for print and Internet does not apply.

HYPOTHESIS 3:

Technology has expedited the leaking process

The number of days between the day the leaker attained the classified documents and the day each media outlet first published the story will be compared to test this hypothesis.

Figure 14: Days since leak creation and first day leak is published in the media

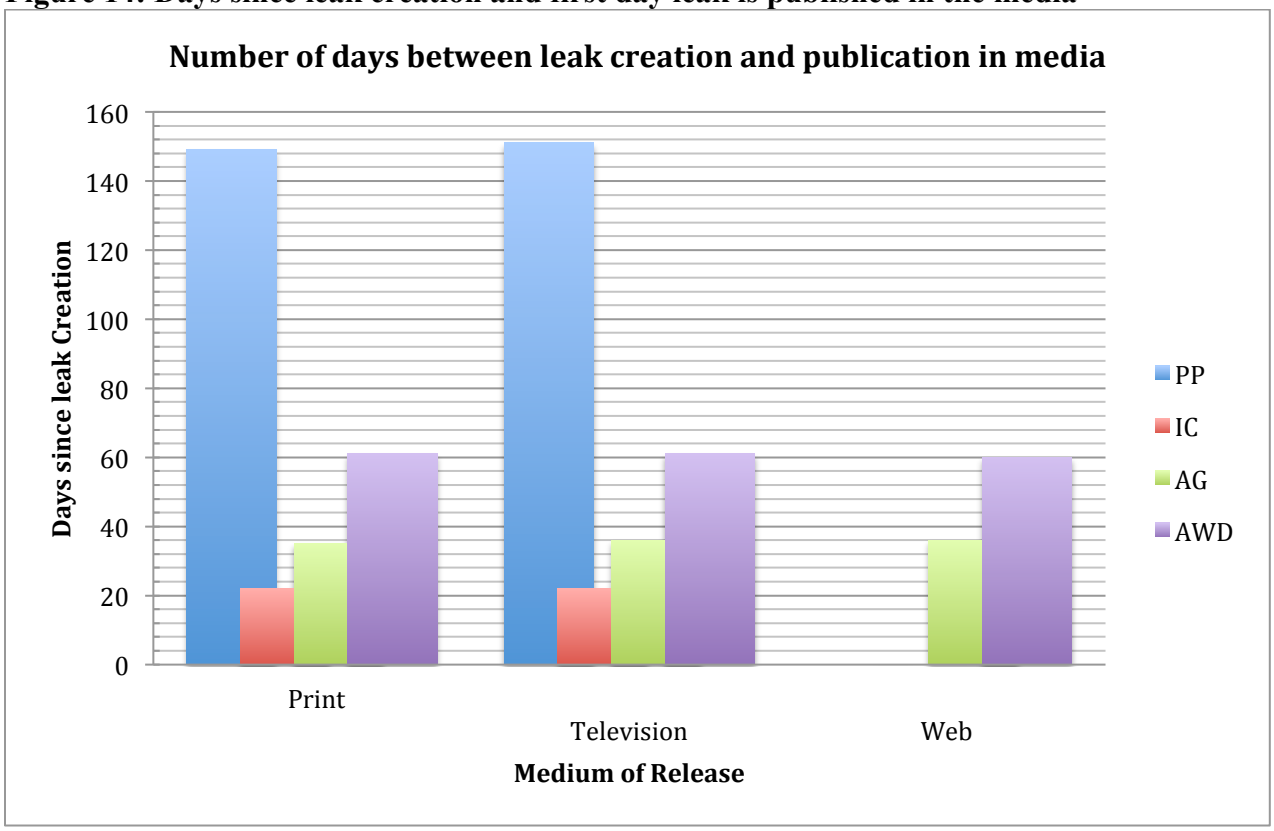


Figure 14 does little to show a trend in how technology has expedited leaking. Under the assumption that technology has gotten better over time, there is a clear decrease in time between the Pentagon Papers, the earliest case study, and the other case studies, in both print and television. The lack of a trend could be explained by other variables, such as the sensitivity of the

documents that could have spurred governmental pressure to slow the press down from releasing such information[31].

This does interestingly show that the release date between each medium is nearly the same for each case study. It can be hypothesized that the time it takes to release leaked information is more dependent on the nature and size of the data. For example, it required less time to release that the U.S. were trading weapons for hostages in Iran-Contra, compared to the release of 200,000 pages of documents in the Afghan War Diary.

Also, there can be numerous reasons why leakers and leaking agencies might hold on to information rather than releasing it immediately. These can be due to fear for legal prosecution, as shown in the Pentagon Papers, or to verify source information or even to release the information at a crucial time, as with the Afghan War Diary.

A more effective measure for determining the speed of leaks might be to compare the time it took to actually obtain the original documents. This could be comparing the time it took Ellsberg to photocopy the Pentagon Papers to the time it took Manning to burn the classified information on to the CD-ROMs.

HYPOTHESIS 4:

Technology has changed the overall lifecycle of leak coverage

Figure 15 and Figure 16 show the coverage of each case study through the year following the initial publication for print and television respectively. Though it is hard to observe a clear pattern emerge from the data collected, it can be argued that the hypotheses are incorrect. The

[31] In the case of the Pentagon Papers, *The New York Times* analyzed the documents for over a month before releasing them

hypothesis that the life span of a leak will shorten is disproved by the fact that all case studies have maintained a steady amount of coverage in the year following the initial leak.

For print media, Figure 15 shows fairly consistent coverage throughout the year, unlike television coverage in Figure 16, which shows concentrated coverage during the first month since the initial leak. The hypothesis that television would show random spikes in coverage can be observed in Figure 16. Figure 17 disproves prior hypothesis that web coverage would remain constant throughout, as it shows that there is an initial surge in the coverage that quickly fades, and remain relatively dormant thereafter. Print media also sees a peak of articles during the first 100 days, but the drop off period is more gradual than television broadcasting, which has sudden drops in articles. The anomaly is Iran-Contra that had multiple peaks in television coverage throughout the year. This could be because of the nature of television during the 1980s, and the highly publicized nature of the trials.

The legal trials that generally follow the leak should definitely be considered when looking at post-leak coverage. Consistent print post-leak coverage could be because the news agency is also following the trials and must refer back to the original leak when publishing the story. In television coverage, displayed in Figure 16, it can be hypothesized that coverage would only be aired if there were a significant breakthrough in the trials, such as a verdict. This could explain the random peaks in coverage throughout the year. This can be verified using the content of broadcast using the Vanderbilt Television Database: for example, the spike in coverage on the 162nd day, May 5 1987, of the Iran-Contra scandal was the day the hearings began.

Figure 15: Print coverage of case studies for year following initial leak

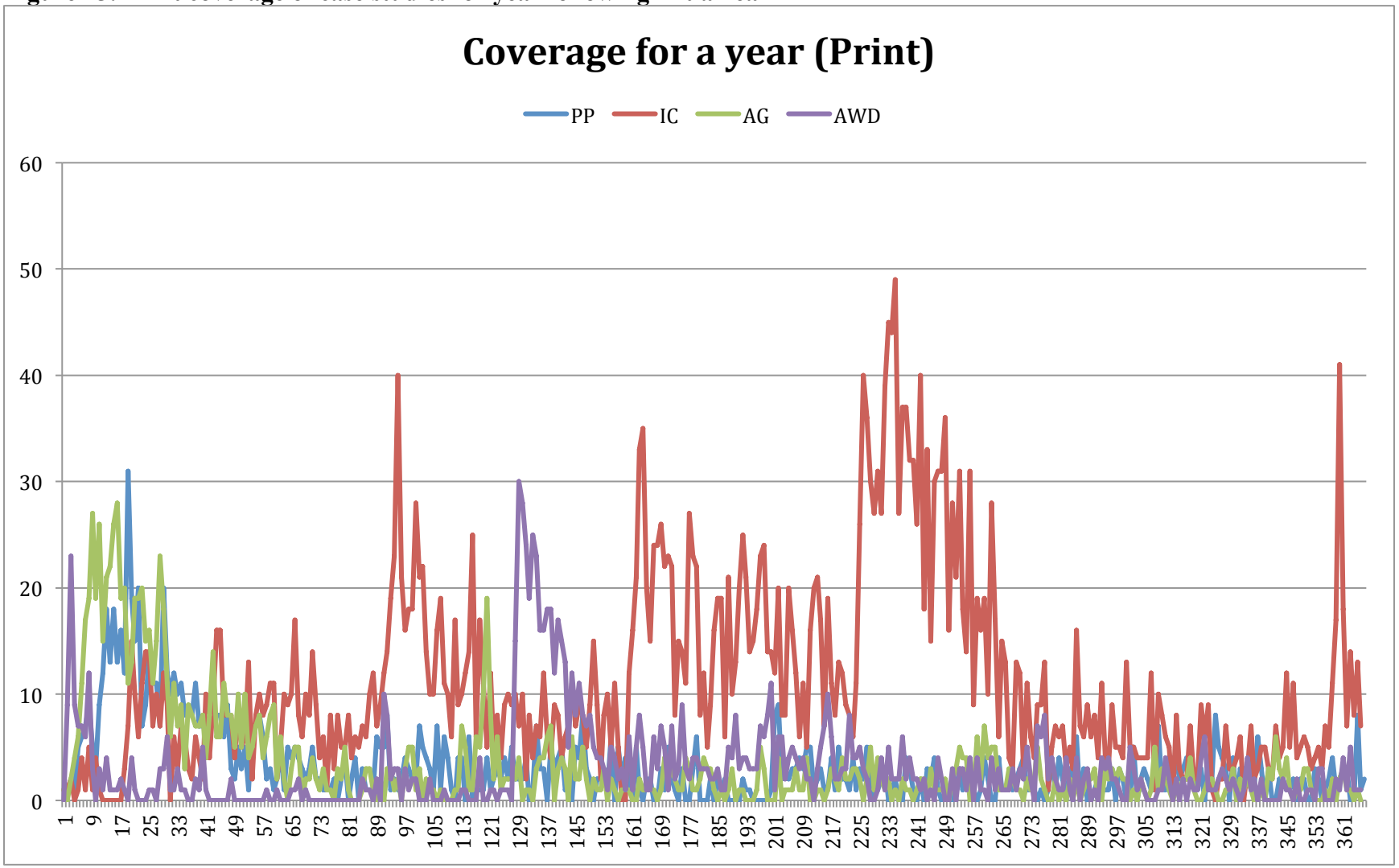


Figure 16: Television coverage of case studies for year following initial leak

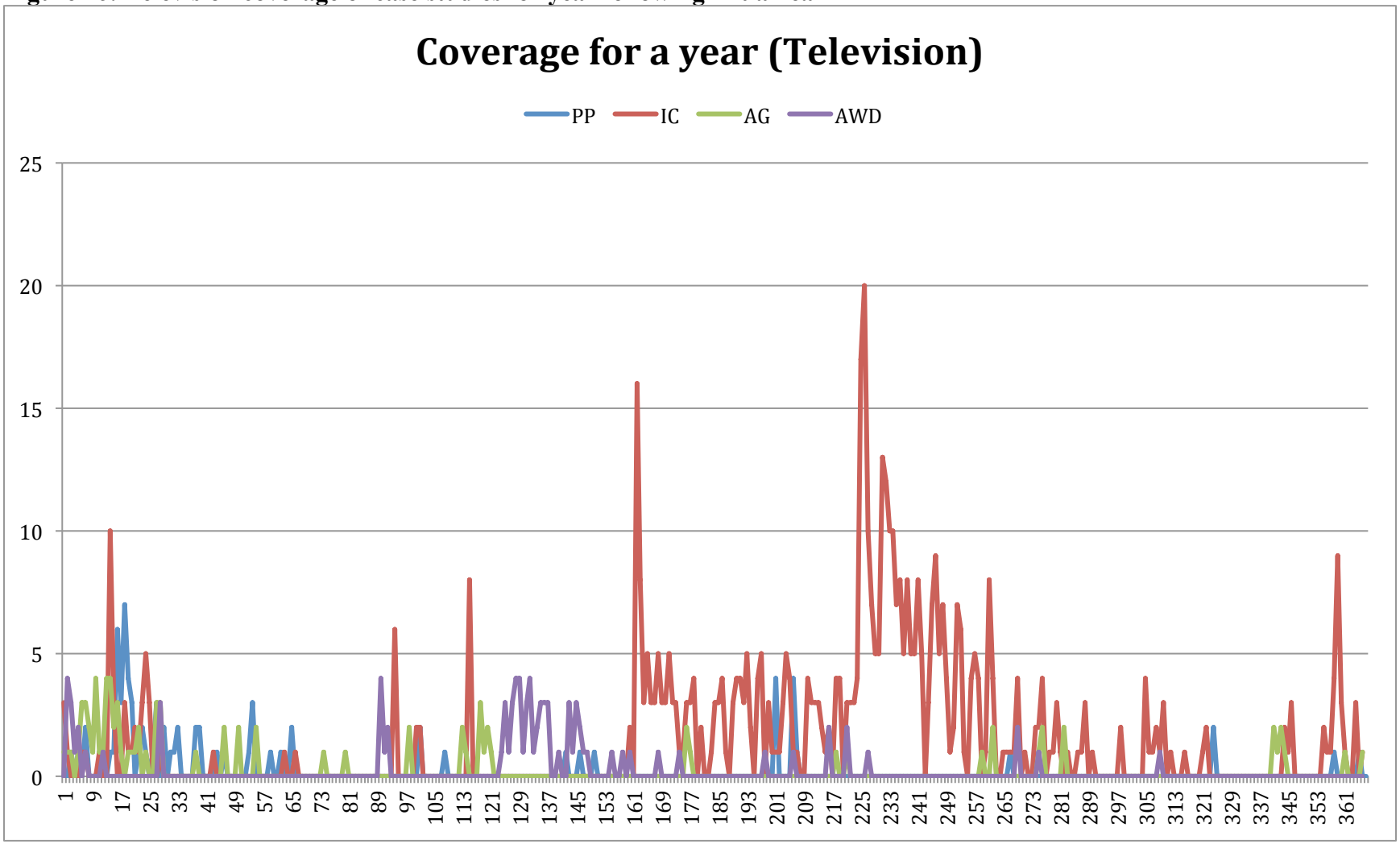
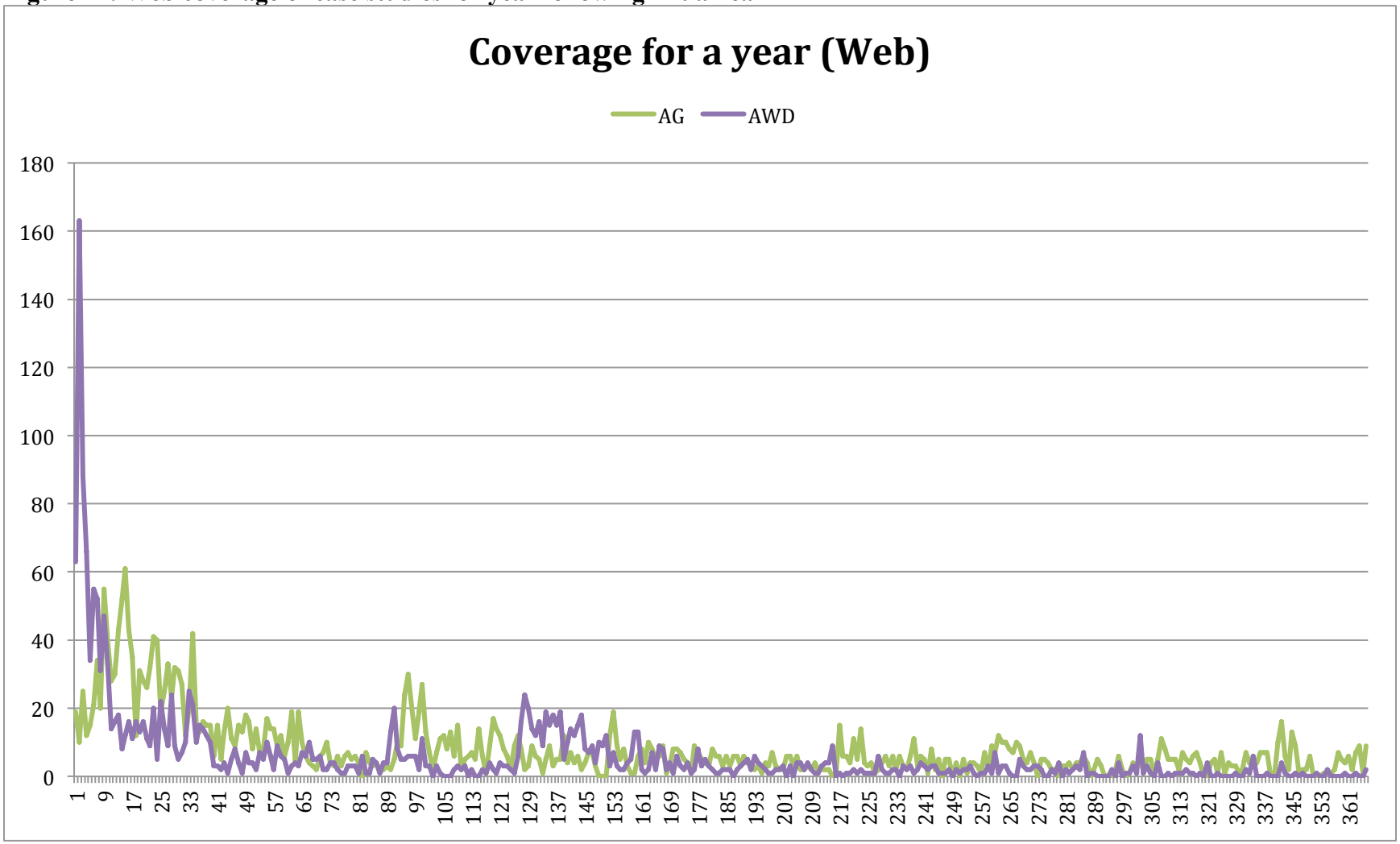


Figure 17: Web coverage of case studies for year following initial leak



CONCLUSIONS

TECHNOLOGY'S ROLE IN LEAK DISPERSION

The findings indicate that technology has definitely had an effect in the leaking process. It has increased the amount of content that has been released to the public, in the form of written articles, mostly in print and web outlets. However, it has decreased the airtime dedicated to the scandals on television broadcasts, most likely due to the increased competition from new channels and broadcast mediums, such as cable television. Technology's role in expediting the leaking process is not evident and retrospectively, the content, size of the leak and the leaker's intentions would have been better determinants in calculating the rate of speed in which the leak is released. It can be postulated that the Internet, and more generally advancements in technology, have quickened the pace of the transfer of information. Because of the Internet, stories and corresponding documents, photos and videos can be published immediately, whereas in print media, agencies must wait until the next print day, and similarly, television studios must wait for the next available air time to break news.

Perhaps due to the unique nature of each case study, it was difficult to find general trends of coverage throughout the mediums within 30 days. This could be because of the different ways in which the data was handled between actors and the varying degrees of classification that these documents had. Looking at leaks in documents that had the same levels of classification might have fixed this error. General trends can be conjectured when looking at coverage throughout the year: print media saw consistent coverage throughout the year, television coverage was clustered during the first month but saw sudden spikes in coverage thereafter. Web coverage, spiked early and faded quickly, and remained low throughout the year.

UNANTICIPATED FINDINGS

It was interesting to discover how inter-related these forms of media were in their coverage of the events: web coverage was followed by television and print coverage. There seemed be an echo effect where peaks in the number of articles were introduced by a rise in web coverage before television coverage.

Another unanticipated observation regarded how stories are framed. Articles about the Pentagon Papers, released mostly by print media, focused on the documents and held government officials accountable. However, the heavy use of television in Iran-Contra, which towards the end mostly aired coverage of the trials, hugely sensationalized the event and focused more on the actors: government officials responsible for the misdeeds. This was also the case with Wikileaks where the articles focused more on Julian Assange than the findings of the Afghan War Diary. The focus of the attention in Abu Ghraib was the abusers - not the leak and how the documents were obtained. It is interesting to note this changing dynamic of the presented content with the changing media landscape due to technology. This could relate to the "flashy methods" that Canby talks about: a sensationalized scandal with the dramatization of the actors is more likely capture the public's attention and draw in more viewers.

What is also interesting is the changing manner of how the press dealt with the leak. The press that was so eager to publish the classified Pentagon Papers, even going to the Supreme Court to fight for the rights to do so, was the same press that asked Wikileaks to self-censor and gain permission from the White House to release the information.

Additionally, the cases have shown that the writings of Allen and Thorsen are correct: modern technology has increased the use and want for anonymity in leaking classified information. In the cases of the Pentagon Papers and Iran-Contra, the leakers were identified either with or

immediately following the leak and admonished shortly thereafter. The leakers left a literal "paper trail": Daniel Ellsberg by handing the paper to *The New York Times*, and Mehdi Hashemi by using posters to leak his story. With Abu Ghraib and the Afghan War Diary, leakers wanted to stay anonymous. Joe Darby feared the potential repercussions from the leak and asked to remain anonymous. Bradley Manning used an Internet chat room and only alluded that he had the documents, never confirming that he did until the transfer of documents over email. This also made it difficult for the government to track down the source of leaks, and in the case of the Afghan War Diary, difficult to catch the culprit.

Also, all the leakers based their motives in leaking confidential information in their moral conscience and believed they did the right thing: confirming the paradigms of literature that discussed the driving forces of a leak: that leakers are driven by their sense of civic duty.

Finally, comparisons showed that the policy changes resulting from these scandals have addressed only the content of the leaks. Apart from the Supreme Court decision that ruled in favor of the New York Times and paved the road for future leakers with the knowledge that they can release information without prosecution, the policy changes that have been placed into effect after the leaks have tried to solve the wrongdoings exposed by the leak, not prevent future leaks. The Pentagon Papers highlighted government wrongdoings and the increased need for accountability, Iran-Contra exposed congressional oversight in foreign policy and the limitations of the executive branch. Both led to changes in which these risks were reduced. From Abu Ghraib, policies regarding prisoner treatment and increasing human rights were developed, and the Afghan War Diary affected policy decisions regarding the war in Afghanistan and the Obama administration's policy decisions the Obama administration regarding war zones.

Further Research

As aforementioned, this project does not consider the full extent of the media market, and further research could look at the impact of technological development in radio, satellite and cable mediums. Furthermore, it does not explain how technology has affected the impact of the leak. A study looking at the circulation numbers of each technology, how many people are presented with the news and how they digest the information would provide a clearer picture of how technology has changed leaks. This could be supported by interviews on what people know about these leaks. Moreover, a qualitative study analyzing the content of leaks could better observe how technology has changed stories' presentation. Lastly, this study only takes into consideration leaks that pertain to military information. A study that looks at other forms of information, such as personal scandals, economic scandals or political information that has been leaked could be researched for a more holistic view on technology's role in leak dispersion.

BIBLIOGRAPHY

A.C. Nielsen Co. (2009). Television Audience Report.

Allan, S., & Thorsen, E. (2009). *Citizen journalism: global perspectives*: Peter Lang.

Assange, J. (2011). *Julian Assange: The Unauthorised Autobiography*: Canongate Books.

Associated Press. (2004, 20 Apr). 22 killed in Baghdad mortar attack, *USA Today*.

Audit Bureau of Circulations. (2009).

Baktiari, B. (1996). *Parliamentary politics in revolutionary Iran: the institutionalization of factional politics*: University Press of Florida.

Barkley, R. A. (2004). ADHD and Television Exposure: Correlation as Cause. *The ADHD Report, 12*(4), 1-4.

Baum, M. A., & Groeling, T. (2008). Reality Asserts Itself: Public Opinion on Iraq and the Elasticity of Reality. *Paper presented at the annual meeting of the APSA 2008 Annual Meeting, Hynes Convention Center, Boston, Massachusetts, Aug 28, 2008, 64*(03), 443-479. Retrieved from

Behr, R. L., & Iyengar, S. (1985). Television News, Real-World Cues, and Changes in the Public Agenda. *The Public Opinion Quarterly, 49*(1), 38-57.

Canby, V. (1971, 11 Nov). Film: Frank Zappa's Surrealist "200 Motels", *New York Times*.

Carter, B. (2010, 2 Apr). Ratings Fall on Newscasts at 2 Networks, *New York Times*.

CIA World Factbook. (2007). United States. Retrieved 26 Oct

Cordesman, A. H. (2010). The Need for Public Transparency and Integrity. *Center for Stratic & International Studies*. Retrieved from

Correll, J. T. (2007). The Pentagon Papers. *Airforce Magazine, 90*.

Database of Issues & Controversies. (2010).

Doorey, T. J. (2007). Intelligence Secrecy and Transparency: Finding the Proper Balance from the War of Independence to the War on Terror *Strategic Insights, VI*(3).

Ellsberg, D. (2003). *Secrets: a memoir of Vietnam and the Pentagon papers*: Penguin.

Gerecht, R. M. (2006, May 9, 2006). Intelligence Deficit Disorder, Commentary, *Wall Street Journal,* p. A.18.

Hamilton, J. (2004). *All the news that's fit to sell : how the market transforms information into news*: Princeton University Press.

Hindman, D. B., & Wiegand, K. (2008). The Big Three's Prime-Time Decline: A Technological and Social Context. *Journal of Broadcasting & Electronic Media, 52*(1), 119-135. doi: 10.1080/08838150701820924

History Commons. (2008). Context of 'April 28, 2004: 60 Minutes Airs Abu Ghraib Prisoner Abuse Story', from http://www.historycommons.org/context.jsp?item=torture,_rendition,_and_other_abuses_against_captives_in_iraq,_afghanistan,_and_elsewhere_994

Howe, W. (2010). A Brief History of the Internet, from http://www.walthowe.com/navnet/history.html

Kent, A. (1999). *Encyclopedia of library and information science*: Dekker.

Kurpius, D. D., Metzgar, E. T., & Rowley, K. M. (2010). Sustaining Hyperlocal Media. *Journalism Studies, 11*(3), 359-376. doi: 10.1080/14616700903429787

Leigh, D., Harding, L., Booth, R., & Arthur, C. (2011). *Wikileaks: inside Julian Assange's war on secrecy*: PublicAffairs.

Louer, L. (2008). *Transnational Shia politics: religious and political networks in the Gulf*: Columbia University Press.
Marsh, D. (2011). Internet History Timeline, from http://www.netvalley.com/archives/mirrors/davemarsh-timeline-1.htm
Martin, B. (2003). The legacy of the Pentagon Papers. *The Whistle, No. 34*(July 2003).
McNeil, A. (1996). *Total television: the comprehensive guide to programming from 1948 to the present*: Penguin Books.
Merriam-Webster. (Ed.) (2011) Merriam-Webster.
Neuman, J. (1996). *Lights, camera, war: is media technology driving international politics?* : St. Martin's Press.
New York Times. (2010). About the Company.
Newman, M. Z. (2010). New media, young audiences and discourses of attention: from Sesame Street to 'snack culture'. *Media, Culture & Society, 32*(4), 15.
Newspaper Association of America. (2011). Annual Daily and Sunday Newspaper Circulation Expenditures.
Nielsen Wire. (2009). More than Half the Homes in U.S. Have Three or More TVs. Retrieved from http://blog.nielsen.com/nielsenwire/media_entertainment/more-than-half-the-homes-in-us-have-three-or-more-tvs/
Picard, R. G. (2003). Cash Cows or Entrecote: Publishing Companies and Disruptive Technologies. *Trends in Communication, 11*(2), 127-136. doi: 10.1207/s15427439tc1102_04
Preston, P. (2010, 31 Jul 2010). WikiLeaks' Afghan story raises dilemma over safety of sources, *The Guardian*.
Project for Excellence in Journalism. (2009). The State of the News Media 2009: an annual report on American journalism, from http://www.stateofthenewsmedia.org/2009/
Project for Excellence in Journalism. (2011a). Annual report of American Journalism 2011.
Project for Excellence in Journalism. (2011b). Newspapers: By the Numbers.
Protess, D. L., & Cook, F. L. (1992). *The Journalism of Outrage: Investigative Reporting and Agenda Building in America*: Guilford Press.
Ricketson, M. (2004). *Writing Feature Stories: How to Research and Write Newspaper and Magazine Articles*: Allen & Unwin.
Rosin, H. (2004, 17 May 2004). When Joseph Comes Marching Home, *Washington Post,* p. C01.
Schoenfeld, G. (2010). *Necessary secrets : national security, the media, and the rule of law*: W. W. Norton & Co.
Seigmund. (2004). CID Investiagation Report.
Sharrock, J. (2008). Am I a Torturer? *Mother Jones*.
Sifry, M. L. (2011). *WikiLeaks and the Age of Transparency*: OR Books, LLC.
Stephens, M. (2000). History of Television. *Grolier Multimedia Encyclopedia*. Retrieved from
U.S. Census Bureau. (2009). Computer and Internet Use.
Vanboskirk, S. (2009, 26 Oct). Interactive Budgets are Growing at the Expense of Offline. Retrieved from http://blogs.forrester.com/marketing/2009/05/interactive-budgets-are-growing-at-the-expense-of-offline.html
Wall, M. (2008). The Taming of the Warblogs: Citizen Journalism and the War in Iraq. In S. Allan & E. Thorsen (Eds.), *Citizen journalism: global perspectives* (pp. 33-42): Peter Lang.
Wall Street Journal. (2011). Audience 2011.

Walsh, L. E. (1993). Final Report of the Independent Counsel for Iran/Contra Matters
Zoglin, R. (1975, 13 Apr). Is Av Westin Shaping the Future of TV News?, *New York Times*.

ACKNOWLEDGMENTS

Special thanks to my advisors, Professor James Hamilton and Professor Judith Kelley, for your advice, support, time and generally putting up with me and my panicking. I could not have completed this project without your mentorship. Big thanks to all my friends and family, especially my loving parents and sister, that have listened to me talk about my thesis for the past year and have helped me through this process.