Visual Framing of Three Major Earthquakes in *the New York Times* and *USA Today* – A Comparative Study

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Abstract

This paper studied how The New York Times and USA Today visually framed the Haitian earthquake of 2010, the Japan earthquake of 2011 and the Nepal earthquake of 2015. By employing a tiered model of visual framing this study undertook a comparative analysis of news images from both papers to tease out the common visual themes and to illustrate the visual similarities and differences between the photographs from both papers. This study also examined news images to determine if the papers used news photographs as symbolic tools or markers to represent the residents and the built environment of the countries impacted by the earthquakes. The results from this analysis revealed the dominant overarching theme that was commonly referenced by both papers and brought to the fore significant differences and similarities between the images analyzed from both papers for all three disasters. Newspaper coverage of the three catastrophic eventsalso brought to light some of the symbolic dimensions of the coverage which helped determine the degree or the extent both papers constructed a personalized and distinct perspective of the disasters through visual imagery.

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INTRODUCTION

Disasters strike with varying intensities and impact extensive geographical areas. They are often marked by a significant loss of life and substantial destruction of material property, together with the disruption of people's livelihoods (Rodriguez & Dynes, 2006). For the above reasons, disasters, whether human-caused, natural or technological are "potentially traumatic event[s] that [are always] collectively experienced, has an acute onset, and is time-delimited" (McFarlane & Norris, 2006). Disasters and their aftermaths receive substantial media coverage because it is the "normative role" (Houston, Pfefferbaum & Rosenholtz, 2012, p.607) of the media to keep the public informed. Media play the invaluable role of "breaking the news" pertaining to a disaster.

Disasters and their interpretation had largely been dominated by oral and written narratives but from early twentieth century onward (Leikam, 2009) visual representation gained momentum and became an integral part of any newspapers' narration of international news events. Other than supplementing news texts and predominantly serving as a formal, straightforward recording of events, news photographs also function as "symbolic markers" augmenting the representation and interpretation of a particular event or a phenomenon. Through easily identifiable codes such as body language, symbols, and inscriptions news images or photographs frame an event and the photographic subject's reactions and relations (Trivundza, 2006, p. 31-35). Images pertaining to catastrophic events thus offer multiple ways to comprehend and construe the significance of those events and provide interpretive frameworks by which "communities not only reflexively judge" those events but it also shapes and refashions our sensibilities towards them (Gil &Wulf, 2015). In that sense, visual representations are fittingly regarded as one of the most "pervasive instruments" of framing news events (Trivundza, 2006, p. 31-35).

The natural disasters examined in this current study such as the Haitian earthquake of 2010, the Japan earthquake of 2011 and the Nepal earthquake of 2015 resulted in a "comprehensive corpus of visual representations" that documented nature's fury (Jackson, 2011). All three disasters became major news events because of the momentous global nature of these events. The disasters caught the world's attention also because of how visual journalists and photo editors set theframing process in motion. In other words, by selecting and editing certain key images with particular expressive and symbolic qualities (Parry, 2011, p.1191) and by repeating and reinforcing those images over others to convey constant meanings (Entman, 1993), visual journalists and editors eventually allow for a congruent interpretation of an event or a phenomenon.

Therefore, the main purpose of this thesis is to focus on the aforementioned earthquakes that took place between 2010 and 2015 in different geographic locations across the world and examine the media construction strategies (or the process of framing) of these earthquakes through visual imagery. By employing a tiered model of visual framingwhich is a four-tiered framework that will aid in frame identification and analysis (Dimitrova& Rodriguez, 2011, p. 61), this study will undertake a comparative analysis of news images from *TheNew York Times* and *USA Today*, and will seek to offer a unique perspective into the visual coverage of the aforementioned disasters. For the purpose of this study, news images will be analyzed across the broader context of the chosen time period to tease out the common visual themes and slants which are likely to gain momentum as the events unfold (Parry, 2011, p. 1189).Images will also be analyzed to illustrate the visual similarities and differences between the photographs from both *TheNew York Times* and *USA Today*. Lastly, images will also be examined to determine if the papers used news photographs as "symbolic tools" (Parry, 2011, p. 1185) to represent the residents and the built environment of the countries impacted by the earthquakes.

Therefore by studying the range of photo offerings from both papers this project will be able to determine the papers'apportioning of attentionto the affected countries (Haiti, Japan, and Nepal) and see if the disasters and the affected countries overall received proportionately less coverage or more [visual] coverage. This will help establish if the papers particularly undermined or substantiated the salience of the disasters to the international community through visual coverage.

However, before delineating the literature and the theoretical framework, it is imperative to throw light upon the context of the three earthquakes.

The Context

Earthquakes with magnitudes of 7.0 and above rattled subduction zones in Haiti, Japan, and Nepalbetween 2010 and 2015. The challenges together with the state of disorder, the fatalities and the vast devastation left in the wake of these natural disasters were almost unfathomable.

On January 12, 2010, an earthquake measuring 7.0 on the Richter scale struck Haiti's densely populated capital Port-au-Prince and two other Haitian cities – Jacmel and Léogâne (Britannica, n.d.). The earthquake was one of the biggest natural disasters which the country experienced since the 18th century and the most devastating natural disaster to have hit the Western hemisphere causing substantial loss of lifeand extensive material damage (HuffingtonPost, 2011). The earthquake killed more than 160,000 (however the official Haitian government count crossed 300,000) and left nearly a million people displaced (Time, 2015).

Similarly, a massive earthquake rocked the north-east of Japan on March 11, 2011. The earthquake (also known as the Great Tōhoku or the Great Sendai earthquake) measuring 9.0 on the Richter scale wasthe strongest to strike the region in decades. The earthquake spawned a ferocious tsunami that exacerbated the loss caused by the earthquake (HuffingtonPost, 2011). The tsunami waves (some measuring 30-feet) inundated the coastal areas causing widespread damage on land and flooding parts of the city of Sendai, Miyagi and Iwate prefecture, Fukushima, Ibaraki, Chiba and other areas. The official death toll reached 20,000 (Britannica, n.d.). Of significant concern following the quake and the tsunami was the status of several nuclear power plants. Flood water caused considerable damage to the reactors and their cooling systems at some of the plants, most notably at the Fukushima Daiichi power plant leading to partial nuclear meltdowns. Concerns grew over possible radiation exposure and Japanese officials established a no-fly zone around the facility. The nuclear accident at the Fukushima Daiichi power plant was deemed to be a "major accident" and was considered to be at par with the Chernobyl disaster of 1986. The disaster was characterized by a "major release of radioactive material with widespread health and environmental effects requiring implementation of planned and extended countermeasures" (CNN Library, 2016).

The Nepalese capital of Kathmandu witnessed a devastating earthquake on April 25th, 2015. The Nepal earthquake (or the Gorkha earthquake as commonly known) measured 7.8 on the Richter scale and killed almost 9,000 people, injured nearly 18,000 and displaced some 2.8 million people. The quake flattened several structures in Kathmandu and other nearby towns and produced landslides that damaged rural villages (Britannica, n.d.).

All three disasters garnered enough international media attention and news media (including Western news media) made the reality of the scale of the disasters fathomable through numerous heartbreaking news images and textual descriptions (The Conversation, 2015).

LITERATURE REVIEW

While newspapers have been lauded for endorsing civic vitality and promoting public discourse (Grabe&Buc, 2009, p. 4), images or visualsgradually gained a stronghold over the millennia and was eventually recognized as an appropriate form of expression for newspapers (Brennen&Hardt, 1995, p. 4). From functioning solely as conventional objective records of actual events and supplementing and authenticating the textual form of a news story (Taylor, 2000, p. 13) to "symbolically synthesiz[ing] the story" (Trivundza, 2015, p.17) – news images had been utilized for many different goals (Meyres, 2002, p. 181).

Journalists, and social scientists too have agreed unanimously that there is undeniably an inherent "special power" in presenting news through images or visuals In other words, "concrete visual details matter enormously" (Iyengar& Kinder,1987, p.35) within the realm of print news and news images specificallymerits critical examination, are worthy of serious empirical and interpretive study and therefore should not be cast aside after a secondary or cursory examination (Parry, 2011, p.1186 & 1190).

Images acquired centrality in the print media because of their ability to shape viewer impressions and attitudes (Grabe&Buc, 2009, p. 7). Audiences are likely to absorb a news image more intensely than an accompanying headline, caption, or the article (Geise& Baden, 2015, p. 50-51). Fahmy (2005b) suggested that news images help readers or audiences make sense of the news even if they omit reading the accompanying text (Peterson & Spratt, 2005). However on the downside, news images do not automatically allow audiences to have a deeper understanding of the issues being portrayed (Rosen, 2005). Griffin (2004) maintained that instead of allowing for the creation of newer perspectives or revealing newer information most news images only reinforces existing ideas and stereotypes (Schwalbe& Dougherty 2015, p.143). Taylor (2000) on the other hand stated that news images by themselves have no identity, they authenticate very little and have limited ability in constructing meanings or public reality of an incident or a phenomenon but gain a meaningful status as "evidence" only if photo editors guarantee their authenticity (p. 132-133).

Photo editors bolster the authenticity of images by relying on (visual) framing which is the process of "selective prioritization [or the omission and inclusion or the repetition] of some images to promote a specific interpretation of events conducted either consciously or subconsciously" (Huang &Fahmy 2013, p. 195).

Visual Messages v. Textual Messages

When it comes to decoding, textual messages are straightforward – words can be decoded easily if one has the basic knowledge of grammatical structures and lexical expressions. (Cook &Gueraud, 2005; Kintsch, 1998). Visual messages on the other hand are processed and decoded "intuitively or by analogical inference" where specific code knowledge is not required (Rose, 2012). In a similar vein, when decoding polysemic visual content or messages, knowledge of conventional codes is again not crucial because visuals allow other multiple strategies (iconic, identical, symbolic) to play a key role in interpreting the complex visual information (Geise& Baden, 2015, p. 58).

Since visual messages can be "easily, quickly and deeply encoded into memory" they are better recognized and remembered than textual messages. Visuals also have an "implied similar-to-reality" (Berger, 1989) feature which enables visuals to present information holistically thereby rendering aspects of the visual reality more salient (Baden &Lecheler, 2012; Bundesen&Habekost, 2008; Geise, 2011). Because of these qualities, visual messages are highly salient, are barely questioned and are comparatively more persuasive and effective than textual messages (Brantner, Lobinger, &Wetzstein, 2011, Gibson &Zillmann, 2000; Rodriguez &Dimitrova, 2011). This implied "superiority" of visuals, however, comes at a price – visuals have to relinquish control over the meanings constructed by the audiences experiencing the visual messages (Geise& Baden, 2015, p. 60-61). Secondly, some visuals require minimal knowledge of conventional codes for decoding but this advantage diminishes if decoding requires a greater amount of knowledge and refers to symbolic or abstracted meaning (Baden &Lecheler, 2012; Holyoak&Thagard, 1995).

According to Messaris and Abraham (2001), not all visuals are rich in details, vivid and "actual imprints of visual reality" (p. 220) and neither are all textual messages unambiguous and clearly explicate the relevant meaning of elements and convey the quality of relations that "transcend the grammatical order" (van Dijk&Kintsch, 1983; Kintsch, 1998). But nonetheless, both visual and textual messages can be arranged along a continuum – from the "unstructured, vivid, and intuitively comprehensible to [the] highly abstracted, [and] sequentially encoded information" (Geise& Baden, 2015, p. 62).

Several scholars have pointed out that "visual messages rarely occur alone". In other words, visual messages cannot function as mere redundant illustrations (Knox, 2007; Cooke, 2003) and are often accompanied by textual messages. Therefore, in light of this abovementioned perspective, visual and textual frame processing cannot be comprehended as fundamentally distinct entities and should operate within a more general framing process (Coleman, 2010; Mueller, 2007).

The Theoretical Concept of Framing

Scholars such as Entman (1993), Iyengar (1991), and Scheuffele and Tewksbury (2007), have suggested that framing has been used to define and construct issues using key or salient aspects of a social reality that is easily comprehended by particular audiences. In other words, framing is referred to as "modes of presentations that journalists and communicators use in presenting relatively complex issues in a way that makes them accessible to lay audiences" (Scheufele& Tewksbury (2007, p.12).

Other pioneers in framing studies such as Gamson and Modigliani (1987) have defined media or news frames as "a central organizing idea or story line that provides meaning to an unfolding strip of events… [and] the frame suggests what the controversy is about, [and makes salient] the essence of the issue" (p.143). Gitlin (1980), explained that through "…persistent patterns …of selection, emphasis, and exclusion" [visual] frames convey constant and coherent meanings rendering key aspects of the visual message more salient and more memorable than others (Entman, 1993). Visual frames also acquire thematic qualities or properties through repetition and emphasis (Luther & Miller, 2005) of key aspects of the visual message thus giving context to an unfolding strip of events (Jha, 2007).

Framing News Images: The Visual Framing Approach

Some scholars have postulated that visual framing is both reliant on and also distinct from textual framing (Fahmy, 2010, p. 698). While contrasting visual framing and framing that occurs in the written parts of the print news, Messaris and Abraham (2001) indicated that visual framing is less obtrusive and more effective as compared to verbal or textual framing because visuals or images possess "special qualities" such as iconicity, indexicality and syntactic implicitness which have endowed visuals with superior salience and have made them "effective tools for framing and [for] articulating ideological messages" (p. 220). In other words, these special qualities have enabled visual framing to "…convey meanings that would be more controversial or might meet with greater audience resistance if they were conveyed through words" (Messaris& Abraham, 2001, p. 215).

Studies employing visual framing as compared to textual framing are relatively less. Framing research had focused mostly on the processing of textual frames and have failed to appropriately conceptualize the role of visuals and satisfactorily integrate visuals in the overall framing research process, thereby limiting the scope for the advancement of empirical research pertaining to the study of visuals (Geise& Baden, 2015, p. 60-61). Scholars have also posited that the process of identifying visual frames as compared to news or media frames can be an arduous task because this field of study lacked the "conceptual and methodological consistency even when common variables [were] examined" (Dimitrova& Rodriguez, 2011, p. 51). What makes this process of identifying visual frames so perplexing is the fact that a whole gamut of methods is practiced. While some studies tease out themes (i.e., Borah & Bulla, 2006 and 2007; Patridge, 2005), others focused on the ideological positions favored by some manner of visual presentation (i.e., Griffin, 2004; Griffin & Lee, 1995).

Recent research, however, has been paying greater attention towards refining visual methodologies in the area of visual framing research thus making the process of (visual) frame identification and frame analysis a much less perplexing task. Geise and Grimm (2013), for example, formulated a three-tier typology for analyzing visual frames. Tier one comprises the surface structure where images are analyzed based on their manifest characteristics or stylistic characteristics such as shot sizes and camera angles (Fahmy, Bock &Wanta, 2014, p.54) and could include the following frames – presentational frames, object frames and configurational frames (Ali, 2015, p. 10). Tier two comprises the meso structure where images are analyzed based on their quasi manifest characteristics and could include the following frames – symbolic frames and stereotypical frames.Tier three comprises the deep structure where images are analyzed based on their latent characteristics. This tier includes the perspective frame and hence gives the audience a general perspective of the images being portrayed. (Fahmy, Bock &Wanta, 2014, p.54).

This current study will seek to empirically engage Dimitrova and Rodriguez's (2011) four-level visual framing typology for identifying and analyzing the common visual frames. Dimitrova and Rodriguez's (2011) visual framing typology is an all-encompassing classification system that can be employed irrespective of whether the unit of analysis is any media content (news or media frames) or the audiences' individual perception of a visual message (audience frames) (p. 52).

Level 1 – Frames here are identified by citing the objects and discrete elements that are part of the visual. Frames come into play once the design elements of a visual are recognized and also when visual sensations are organized or combined into themes. According to Panofsky (1970) this level comprises the "primary or natural subject matter" (Dimitrova& Rodriguez's, 2011, p. 53). This level also attempts to answer the question "who or what is being depicted here?"

Fahmy et al (2006) used this approach to conduct a comparative visual analysis of the front-page images from US newspapers and images from the wire services such as the *Associated Press* and *Reuters* to study the coverageof Hurricane Katrina. The researchers found the following themes emerge as the news frames: timeframe, location, flood victims, death, suffering of non-white citizens, emotional portrayal, presence of public officials, and aerial depictions (of massive destruction). After a thorough analysis of the dominant front-page photos against the total number of photographs offered by the wire services, the researchers concluded that the differences were "pronounced" and the salient frames generated by the newspaper front pages "differed significantly" from that of the wire services' photographic offering (p. 551-554).

In another study Borah and Bulla (2006) examined how five newspapers from three different countries constructed the Indian Ocean Tsunami and Hurricane Katrina. They examined the photo offerings from *The New York Times* and *The Washington Post* from the US, *The London Times* from the UK, and *The Times of India* and *The Hindu* from India to uncover the salient frames. Images from all five publications were examined and the following themes emerged as the news frames: lives lost frame (the display of dead bodies), lives saved frame (focusing on survivors), physical frame (material damage or the objectification of the disasters), emotional frame (humanizing the disasters), political frame (politicians visiting the disaster sites) and other (p. 15). They discovered that there was "a considerable difference among all five newspapers in terms of the salient frames used" and suggested that these differences were attributable not just to the geographical, ideological and cultural differences between the media outlets but also to their journalistic routine and gate keeping choices (p. 17).

Level 2 – Here images and photographs are viewed as stylistic-semiotic systems. This level comprises the editorial and design conventions that play a fundamental role in the presentation of any visuals. This level thus focuses on the stylistic conventions (shot type), the pictorial conventions (social distance, visual modality, and subject behavior) and technical transformations and how such conventions and styles acquire social meanings (p. 55).

For example, Fahmy (2004) conducted a content analysis of the *Associated Press* wire photographs to examine the portrayal of the Afghan women during the Taliban regime and after the fall of the Taliban regime. Her study focused on the following pictorial and stylistic conventions: visual subordination (representational meaning), point of view (camera angle), social distance (shot type), imaginary contact (subject behavior), behavior (physical activity of the Afghan women) and general portrayal of the Afghan women (p. 91-98). Results from her study highlighted the fact that Afghan women were "depicted differently between the two time-periods: during and after Taliban rule in Afghanistan" (p. 98). In other words, the AP images showed that "women after the fall of the Taliban regime [were] portrayed as more involved, interactive, more socially intimate and symbolically equal to the viewer"but they were also "depicted still wearing their burqas, indicating a less simplistic version of Afghan women's liberation" (p. 106).

Another aspect that Borah (2009) focused on other than identifying the salient frames or themes in her newspaper image analysis of the Indian Ocean tsunami and the Hurricane Katrina disasters was the papers' (*The New York Times* and *TheWashington Post)* portrayal of the dead. Images from both papers were categorized into the following stylistic variables (shot types) – aerial, full, long, mid and close up. She found that there was a difference in the depiction of the dead between the two disasters in both newspapers. Both *The New York Times* and *The Washington Post* used closer shots which signified a "personal or social relationship" in their portrayal of the tsunami victims while in case of Hurricane Katrina, both papers mostly used smaller to medium pictures and used "shots of the dead that signified public distance" (p. 52 & 53).

Level 3 – At this level humans and objects presented in the visuals not only signify a particular individual, thing or place but also signify the ideas and the concepts attached to these photo subjects. Here visuals are analyzed as symbols which "combine, compress and communicate social meanings" (Dimitrova& Rodriguez's, 2011, p. 56). This level pertains to Panofsky's (1970) concept of the "secondary or conventional subject matter". Frames here are identified by identifying and analyzing symbols in the pictorial field. According to van Leeuwen (2001), these symbols are of two types: the abstract symbols that comprises shapes and objects which have symbolic values (a country's national flag symbolizing patriotism) and the figurative symbols or represented persons, places, and things with symbolic value (for example the Dalai Lama). This level also comprises the visual metaphors which can be "defined as a representation of an abstract concept through a concrete image" (Lule, 2003).

For example, Pyka (2010) examined how *Der Spiegel* a weekly German news magazine visually framed symbols of patriotism and national identity on its front covers and how these depictions differed before and after certain seminal events in Germany such as the building of the Berlin Wall, the reunification of Germany, the adoption of Euro and the 2006 World Cup (p. 2). The magazine covers focused on the following five symbols of patriotism and national identity: political figures, the German flag, Germany's national colors of black, red and yellow, the coat of arms, and on symbols classified as 'other' that included the Deutsche Mark (D-Mark), iconic monuments, the geographic contour of Germany and image of a German passport (p. 36). Results from the study revealed that a greater number of the patriotism and national identity symbols were used after the events in case of three out of the four events than before the events. There was however an exception with the adoption of the Euro event where more symbols was used before the event than after the event (p. 62 -96).

In another study, Aday et al. (2005) examined the media coverage of the toppling of a statue of Saddam Hussein on April 9, 2003 on two networks: CNN and FNC. The central focus of their study was to see how a "victory frame" was adopted by the two networks in covering the statue's fall (p. 320). The researchers found that the repeated airing of the iconic image of the falling statue "crowded out other potential stories and alternative frames". The toppling of the statue although symbolized the "end" of an authoritarian regime and signaled the "historic liberation of an oppressed people" (p. 324-325) was equally misleading because it gave the false impression that "the war was over" when in reality heavy fighting still continued throughout Baghdad and other parts of Iraq (p. 314 & 327).

Level 4 – This level is closely related to Barthes' (1977) notion of "iconographical symbolism" and brings to the fore the ideological meanings which are an integral part of an image. This level also conjoins the symbols and stylistic features of an image to offer a coherent interpretation of the "why" behind the representations being analyzed. Pieterse (1992) asserted that those intending to study and analyze the frames at this level tend to look for answers to questions related to access and ideology: "What interests are being served by these representations? Whose voices are being heard? What ideas dominate?" According to Panofsky (1970), frames at this level are analyzed to "ascertain those underlying principles which reveal the basic attitude of a nation, a period, a class, a religious or philosophical persuasion" (p. 55).

For example, Fahmy 2010 conducted a study to examine the contrasting visual narratives adopted by the English- and Arabic-language transnational press in covering the 9/11 attacks and the Afghan War. The *International Herald Tribune* (IHT) and the *Al-Hayat* (both elite newspapers) were chosen as the medium of study and the following four indicators (two framing devices and two sets of frames) were used to study the papers' depiction of both events: the emphasis device (focusing on both frequency and dominance), the graphic device (focusing on graphic portrayals or realistic depictions of the dead and the suffering of victims), and the human-interest vs. the technical frame and the anti-war vs. the pro-war frame (p. 702-704). The author concluded that the papers' emphasis on certain frames "was somehow predetermined" (p. 713) and that the papers were eventually "expected to differ" (p. 698) in their coverage of both events. She further suggested that this was attributable to the "socially shared and persistent ideological differences over time in the two sources analyzed" (p.698).

In another study Fahmy and Kim (2008) conducted a visual content analysis where they analyzed 1305 IraqWar-related images from both *The New York Times* (representative of the US press) and *The Guardian* (representative of the British press). The researchers identified four categories (out of the 18 major categories) that dominated the visual coverage of both papers – troops, civilian life, political leaders and encounter. These four categories constituted a majority (53.8 %) of all the images analyzed from both papers. Despite these initial similarities, *The New York Times* and *The Guardian* (papers with liberal tendencies) visually depicted the war differently. The researchers concluded that the visual portrayal of the war was "extremely narrow and ally, centered" (p. 455). The researchers further suggested that the papers covered the war based on the "level of military involvement and public opinion in their respective countries" and not based on the political leanings of the papers or "the level of importance of the issue being covered" (p. 458).

As part of their next level of analysis, Aday et al (2005) also explored to see if the "victory frame" had an effect on shaping the news agenda of the two networks, CNN and FNC in the days following the toppling of the statue of Saddam Hussein in Firdos Square. A comparison of the coverage in the week before and after the statue fell revealed that the frame did have an "immediate and powerful impact" on the agendas of the two networks (p. 325). Both networks demonstrated a sharp decline in the quantity of war coverage as did three other broadcast networks: ABC, NBC and CBS. "Battle stories and their corollary and stories about strategy and tactics" ceased to dominate the news agendas at the two networks immediately after April 9th despite the fact that intense fighting still continued in Baghdad and other parts of Iraq (p. 314 & 326). The researchers also claimed that this coverage of the toppling of Saddam Hussein's statue also "shaped public opinion [that the war was over] in the days that followed" and "even bolstered support for the President" (p. 327).

Therefore in light of the aforementioned perspectives, the research questions are as follows:

RQ1: Based on level 1 of Dimitrova and Rodriguez's visual framing typology what was the dominant overarching theme that was commonly referenced by *The New York Times* and *USA Today* throughout the period of analysis?

RQ 2: What were some of the inter-paper similarities and differences in the visual coverage of the three disasters?

RQ 3: Based on level 3 of Dimitrova and Rodriguez's visual framing typology, to what degree did the newspapers use visual symbolism (symbolic images) to construct visual narratives of the three disasters?

METHOD

This study proposes a qualitative (visual) analysis of two US newspapers (*TheNew York Times* and *USA Today*). Both papers were specifically chosen forthe purpose of this study because both played a crucial role in the dissemination of visual news pertaining to the disasters nationally as well as internationally. Also, the papers are national newspapers and are part of the list of topten USnewspapers based on their average daily circulation figures. Further, this research intends to study the perspectives or the angles (Fahmy, 2010, p.697) that were favored by both papers and hopes to highlight in some detail the images that were consistently selected by the papers and to extrapolate the nature of visual framing of the disasters in the two newspapers. However, as a caveat one should not generalize to all US national newspapers from these two newspapers but the results derived from this research may nevertheless point towards future research directions where a larger database of US media outlets could be examined to study an even stronger manifestation of visual framing of the events researched in this thesis (Fahmy, 2010, p. 701).

Digital microfilms of newspaper images from *TheNew York Times* and *USA Today* were examined for the purpose of this study. The news images were retrieved from the ProQuest database. Newspaper title, the appropriate year of the incident, month and day were selected to access the news images. The current study researched only news-related visuals while excluding op-ed-, sports-, business-, arts-, travel- and entertainment-related visuals, among others.

No set time framehas been assigned as the period of analysis. Instead, pertinent images were examined till the time they continued to appear in both papers because this project intends to not only focus on the immediate aftermath of each of these incidents but to also tease out the broader themes and study the dominant overarching theme that was commonly referenced throughout the period of analysis. This study also aims to tease out the similarities and the dissimilarities between the images analyzed from both papers for all three disasters and see if the images corresponded to the reality it represented(Schwalbe& Dougherty, 2015, p. 144). Therefore, images were collected and analyzed from the day exactly after the disasters first occurred up until the time they stopped appearing in both newspapers – if images pertaining to a disaster stopped appearing in the newspapers for fifteen consecutive days, then the fifteenth day was regarded as the cutoff date or as the end of the analyses period for each of the three incidents for both newspapers.

All three incidents examined in this study were earthquakes with a magnitude of 7 and above and the scale and the depth of physical devastation was considerable in the aftermath of each of these incidents and the death toll was not in hundreds but in thousands. In other words, this study did not just focus on the magnitude aspect of the disasters. But rather the following factors were taken into account such as the fatality aspect of each of the disasters, the number of civilians displaced and injured and the estimated physical damage to property. Other earthquakes also with a magnitude of 7 and above such as the (the Sumatra earthquake and the Philippine earthquake of 2012, the Okhotsk Sea earthquake and the Balochistan earthquake of 2013 and the Chilean (Iquique) earthquake and China (Ludian) earthquake of 2014 took place within this same time frame (between 2010 and 2015) but those incidents were specifically not selected for the purpose of this study because those incidents failed to score on the degree of fatality and on the other above-mentioned factors.

The visual framing approach[1] used for this study examined news images at the "compositional level" (Parry, 2011, p. 1189) which focused on the visual content within the frame and which captures the complex reality of an Incident such as the disasters in question or a phenomenon. Here news images from both papers were analyzed to determine the "primary or the natural subject matter" (Panofsky, 1970, p. 53) from the images. This was followed by an analysis at the "immediate discourse level" (Parry, 2011, p. 1189) where image captions were studied to supplement image interpretation because the clarity of many of the images was questionable and as a result visual cues could not be determined from the images (Fahmy, 2004, p. 99). Thus, captions were consulted for clarifying image details.

For example, captions were especially helpful when trying to differentiate whether a subject is injured or dead or if it's an image of rescue workers or displaced civilians or survivors as onlookers and bystanders or displaced civilians or survivors as rescue workers and to also determine if an image is focusing more on the material destruction such as collapsed buildings or on the survivors or civilians such as hapless civilians surveying a pile of rubble. Image captions were also used to determine if a group of displaced civilians or survivors were related and were photographed together in times of crisis or if the group consisted of strangers photographed together.

Both the digital microfilms of newspaper images and their captions were also studied in depth to ascertain if the newspapers used and repeated symbolic and stereotypical images to represent the residents and the built environment of the countries impacted by the earthquakes.

Therefore, by following the above-mentioned approach, a total of 527 images (345 images from *The New York Times* and 182 images from *USA Today*)[2] were examined in this study. Each pertinent image from both papers was grouped into four broader themes such as –

(a) survivor portrayal, (b) rescue operation/relief efforts in progress, (c) material destruction or damage to the infrastructure, (d) victim portrayal and (e) other. Next, each broader theme was further classified into several sub-categories or sub-themes. For example, the *survivor portrayal* theme was operationalized by coding for the group and individual suffering sub-theme, relatives and family members grieving over dead bodies sub-theme, collective mourning or praying for others sub-theme, onlookers or bystanders sub-theme and survivors involved in rescue activities sub-theme. Next, the *rescue operation/relief efforts in progress theme* was operationalized by coding for local rescue operation in progress sub-theme, military intervention – local sub-theme and foreign search and rescue team sub-theme. The *material destruction or damage to the infrastructure* theme was operationalized by coding for collapsed and damaged buildings sub-theme, debris or rubble sub-theme, ruined places of tourist attractions sub-theme and roads with gaping cracks and crevices sub-theme. The *victim portrayal* theme did not include any sub-categories or sub-themes and images were coded for the broader theme or category.

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[1]This current study empirically engagedDimitrova and Rodriguez's (2011) four-level visual framing typology for identifying and analyzing the common visual frames.This project however did not attempt to analyze news images based on level 2 ofDimitrova and Rodriguez's (2011) visual framing typology because this level specifically focused on the presentation of visuals – the stylistic and thepictorial conventions and therefore analyzing every news image based on camera shots and image size without a set time frame was not feasible enough and was beyond the scope of this project. This project examined all pertinent images of all the three disasters till the time they continued to appear in both papers. Examining news images based on level 3 of Dimitrova and Rodriguez's (2011) visual framing typology allowed me to critically analyze the presence of visual symbolism in the pictorial field. I examined the images to see if the newspapers sanctioned complex and "culture-bound interpretations" since news images are very much content-driven and it was imperative to understand if and to what extent both papers constructed a "highly personalized and distinct" perspective of the three disasters through visual imagery (Dimitrova& Rodriguez's, 2011, p. 56).

Lastly, this project also did not attempt to analyze news images based on level 4 ofDimitrova and Rodriguez's (2011) visual framing typology because this level specifically focused on "the underlying principles which reveal the basic attitude of a nation, a period, a class, a religious or philosophical persuasion" (Panofsky, 1970). Therefore, it was again beyond the scope of this project to devise techniques to fathom a nation's stance based on three non-Western natural disasters because these natural disasters did not accurately reflect the entire natural disaster population from non-Western countries. The same also applied in case of US newspapers – two newspapers did not accurately represent the entire newspaper population in the US or the western world.

[2] For the Japan earthquake images pertaining to the earthquake, tsunami and the nuclear meltdown were part of the analysis since one event followed the other – the massive earthquake triggered the tsunami and the tsunami caused the nuclear meltdown.

The *other* category included images that were uncategorizable. This study identified the broader themes or frames that were considered replicable from other visual framing studies conducted in the past (see, for example, Ali, 2015; Borah & Bulla, 2006; Borah, 2009; Fahmy et al, 2006).

Finally, this research design was particularly selected over others because this design permitted "subjective coding" (Parry, 2011, p. 1190) of the images pertaining to the three disasters since each of the incidents were typically marked by periods of intense visuality

RESULTS AND DISCUSSION

Research Question 1 asked about the dominant overarching theme that was referenced (by the papers) throughout the analysis period. The dominant overarching theme for this study was "survivor portrayal" (referenced in 43.0 percent of all photographs from both papers –*TheNew York Times* and *USA Today*for all three disasters). The next most commonly referenced theme was "rescue operation or relief efforts in progress". Across the entire sample of news images analyzed, this particular category comprised a total of 17.8 percent, followed by "material destruction or damage to the infrastructure" theme (9.7 percent). The "victim portrayal" theme which was supposed to include the more "distressing casualty imagery" (Parry 2011, p.1191) was the least referenced (3.4 percent) by both papers for all three disasters. News images that were ambiguously framed (26.2 percent) were assigned to the "other" category **(see Table 1.)**.

Table 1. The number of photographs for the common visual themes and percentages of pictures in *The New York Times* and *USA Today* (N =714)

Themes	The New York Times	USA Today	Total
Theme 1 Survivor Portrayal	220 (30.8%)	87 (12.2%)	307 (43.0 %)
Theme 2 Rescue operation/relief efforts in progress	63 (8.8%)	64 (9.0%)	127 (17.8%)
Theme 3 Material destruction or damage to the infrastructure	45(6.3%)	24 (3.4%)	69 (9.7%)
Theme 4 Victim portrayal or portrayal of the dead	17 (2.4%)	7(1.0%)	24 (3.4 %)
Other	145 (20.3%)	42 (5.9 %)	187(26.2%)
Total	**490 (100%)**	**224 (100%)**	**714 (100%)**

Each broader theme was further classified into several sub-themes or sub-categories (12 in total). The "group and individual suffering" sub-theme dominated overall (247 images, or 46.9percent) followed by the "local rescue operation in progress" sub-theme (57 images, or 10.8 percent), the "foreign search and rescue team" sub-theme (48 images, or 9.1 percent) and the "collapsed and destroyed buildings" sub-theme (38 images, or 7.2 percent) from both papers **(see Tables 2, 3&4)**. This analysis shows that *TheNew York Times* published close to twice the total number of images published by *USA Today* (345 images, or 65.5 percent). USA Today ran a total of 182 images (or 34.5 percent) for all three disasters.

Table 2. The number of photographs for the "survivor portrayal" theme and each sub-theme and percentages of pictures in *The New York Times* and *USA Today* (N=307)

Sub-themes	The New York Times	USA Today	Total
Group and individual suffering	176 (57.3%)	71(23.1%)	247 (80.5%)
Relatives and family members grieving over dead bodies	13 (4.2%)	2 (0.7%)	15 (5.0%)
Collective mourning or praying for others	8 (2.6%)	5 (1.6%)	13 (4.2%)
Onlookers or bystanders	7 (2.3%)	4 (0.1%)	11(3.6%)
Survivors involved in rescue activities	16 (5.2%)	5 (1.6%)	21 (6.8%)
Total	**220 (100%)**	**87 (100%)**	**307 (100%)**

Table 3. The number of photographs for the "rescue operation or relief effortsin progress" theme and each sub-theme and percentages of pictures in *The New YorkTimes* and *USA Today* (N=127)

Sub-themes	The New York Times	USA Today	Total
Local rescue operation in progress	35 (27.6%)	22 (17.3%)	57 (45.0%)
Military intervention – local	13 (10.2%)	9 (7.1%)	22 (17.3%)
Foreign search and rescue team	15 (11.8%)	33 (26.0%)	48 (37.8%)
Total	**63 (100%)**	**64 (100%)**	**127 (100%)**

Table 4. The number of photographs for the "material destruction or damageto the infrastructure" theme and each sub-theme and percentages of picturesin *The New York Times* and *USA Today* (N= 69)

Sub-themes	The New York Times	USA Today	Total
Collapsed and destroyed buildings	25 (36.2)	13 (18.8)	38 (55.0)
Debris or rubble	13 (18.8)	7 (10.1)	20 (29)
Ruined places of tourist attractions	4 (5.8)	4 (5.8)	8 (11.6)
Roads with gaping cracks and crevices	3 (4.3)	0 (0%)	3 (4.3)
Total	**45 (100%)**	**24 (100%)**	**69 (100%)**

One aspect of the visual coverage of the disasters which seemed unprecedented was the papers' emphasis on the human side of the disaster (Fahmy& Kim, 2008, p. 455). Both papers overall consistently ran more images for the survivor portrayal theme than for any of the other three themes (thereby humanizing the disasters) given that the earthquakes caused massive damage to property together with fatalities, civilians being displaced and injured. For example, the estimated death toll for Haiti was between 220,000-316,000, the total number of injured was 300,000 and displaced 64,680 (as of March 31, 2015) with $210-$300 bn worth of property damage (CNN, 2015). Similarly for the Japan earthquake, the estimated death toll was around 18,500, the total number of displaced was 230,000 (Britannica, n.d.) with $210bn worth of property damage (AFP, 2011) and for the Nepal earthquake, the estimated death toll was more than 8,300, with nearly 18,000 people injured and nearly 2.8 million people displaced (UNDispatch, 2015) with $5-$10 bn worth of property damage (Britannica, n.d.). Going by these figures, both papers should have published proportionately more images depicting human toll and material destruction. Secondly, both papers consistently ran very few visuals of the Nepal earthquake as compared to the Haitian earthquake and Japan earthquake. Visual coverage of the Nepal earthquake ended almost abruptly in the case of *USA Today* and coverage became scanty from the third week of May 2015 in the case of *The New York Times*.

Although the damages caused by the Nepal earthquake was not as severe as the Haitian earthquake or the Japan earthquake but it was nonetheless a major disaster that deserved substantial and almost similar coverage by both papers.

Research Question 2 asked about the inter-paper similarities and dissimilarities or differences in the visual coverage of all three disasters. Before discussing the visual similarities and differences between the images analyzed, this section will briefly touch upon the four broader themes.

Theme 1: Survivor portrayal

Images coded for this theme included survivors trying to fathom what was occurring, images highlighting the plight of the displaced civilians, images highlighting the physical suffering (injuries and wounds) and psychological suffering (personal loss) of disaster survivors, survivors trying to salvage their belongings, images of survivors leaving the disaster sites, and images depicting a slow return to normalcy. This theme brought to the fore several similarities and differences between the disasters that are noteworthy**(see Table 2.)**.

The first similarity was the mass exodus of survivors from Haiti and Japan. Several images depicted the survivors fleeing the disaster sites. For example, in case of Haiti *The New York Times* ran visuals (on January 16th , 2010) **(Figure 1.)** and January 19th ,2010 where survivors were trying to climb an already overcrowded bus while *USA Today* published an image on January 26th ,2010 implying the same **(Figure 2.)**. In case of Japan, *TheNew York Times* ran visuals on March 16th, 2011 **(Figure 3.)**,March 19th, 2011 and March 20th, 2011 where residents of Yamagata were preparing to leave the city in one and hapless survivors waiting for a ride to safer places in another and survivors waiting for a bus ride out of Sendai in the third. *USA Today* ran a visual on April 5th 2011**(Figure 4.)**where a mother and her daughter were looking at a bus schedule at a train station. Both *TheNew York Times* and *USA Today* did not publish any identifiable images that were coded in case of the Nepal earthquake.

It is not uncommon for the civilians of an earthquake ravaged country to abandon their homes and leave the disaster zones mostly because these zones often do not receive aid on time and relief agencies are unable to deliver the aid rapidly and to the right places. Disaster survivors also tend to travel to areas where they have their "significant social bonds and support". For example, after the devastation many Haitians left Port-au-Prince to live with their "rural cousins in search of clean water, sanitation and help"(Fleur, 2012). This however is mostly applicable to small, low-income countries such as Haiti. Although the final destination was not clear from the news images from both papers but the papers aptly highlighted the departure of the Haitians to safer pastures. But some images did show Haitian children and some Haitian families arriving in the US to start a new life with foster parents or with their relatives. In case of countries like Japan, the possibility of a nuclear meltdown at the Fukushima Daiichi power plant triggered the frantic evacuation process (CNN, 2016). The mass movement or the forced displacement of the Japanese was dictated by the government where the government issued evacuation orders for residents living within 20km radius of the power plant (L.A. Times, 2014).

The next few examples highlight the difference in the coverage between the Haitian earthquake, Japan earthquake and Nepal earthquake. While food was available at makeshift shelters for the Japanese, the Haitians had to jostle each other to receive food and water. For example, in case of Haiti, *USA Today* ran visuals between January 29th-31st, 2010 **(Figure 5.)** and February 3rd, 2010 where survivors were jostling violently for food near a food-aid location in Port-au-Prince. *TheNew York Times* ran a similar visual on January16th, 2010 and January 27th, 2010 **(Figure 6.)** where Haitians were jostling to get water and on January 23rd, 2010, which depicted men running after an American Army convoy for water. *USA Today,* for example, ran another visual on February 1st, 2010 where Haitian men and women had formed separate parallel lines – after the US paratroopers from the 82nd Airborne intervened to quell the disorderly crowd and a second image on February 15th, 2010 **(Figure 7.)** where hordes of Haitians had lined up to receive food in Port-au-Prince. *TheNew York Times* ran similar visuals on January 20th, 2010 and on January 23rd, 2010 **(Figure 8.)** which depicted Haitians lined up to collect water in Port-au-Prince.

In case of the Japan earthquake, *USA Today* ran visuals between March 18th - 20th ,2011 **(Figure 9.)**, which depicted displaced survivors at an evacuation center receiving free soup and survivors eating food at an evacuation center. Other examples include, images published on March 21st, 2011 (man sipping hot soup in a shelter) and March 28th, 2011 where several displaced survivorsare offered lunch at an evacuation center.

*TheNew York Times,*for example, ran a similar visual on March 17th, 2011, which showed survivors put on a brave face despite their grief and desolationwhile trying to maintain the "orderly routines of normal Japanese life" and another image on March 28th,2011**(Figure 10.)** where displacedevacueeslined-up in an orderly fashion to be fed. As for the Nepal earthquake, *TheNew York Times*published an image on April 27th, 2015**(Figure 11.)** which depicted displaced civilians lined up to receive drinking water.

These few instances where the Haitians had lined up or were patiently waiting their turn to receive food and water instead of jostling, give us an opportunity to draw parallels between both the Japanese and the Haitians. But according to a columnist for *The Philippine Star*, "Japanese discipline rule[d] despite disaster."Clearly at every step the Japanese were portrayed as disciplined and orderly by both papers as opposed to the Haitians who were portrayed as unruly, disorderly and at times violent which is reminiscent of the undisciplined thieves in post-Katrina New Orleans. One plausible explanation of the Japanese orderliness could be the presence of a "robust system of laws" reinforcing honesty and the presence of an active and visible police force (Beam, 2011). Moreover, Japan is a prosperous country and communities and government structures are likely to be far better prepared for catastrophic events such as earthquakes and the tsunamis than an under-resourced country such as Haiti (The Week, 2011).

The next few examples will highlight another important difference in the visual coverage between the Haitian earthquake, Japan earthquake and Nepal earthquake. For the Haitian earthquake both papers' focused more on the physical injuries sustained by the disaster survivors and for the Japan earthquake, the papers' focused more on the psychological suffering of the quake and tsunami survivors.

For the Haitian earthquake, *USA Today*, for example, ran a visuals on January 20th ,2011 **(Figure 12.)**, which showed a young girl crying in pain while being treated for her injuries. Another image on January 27th ,2011, showed the image of a glum-looking child waiting to be medevaced and between February 5th -7th ,2010, the paper ran two visuals –in one a mother carried her injured daughter at an aid distribution point in Port-au-Prince and the other image was that of an amputee wife and her husband. In case of *USA Today*, images pertaining to psychological suffering or distress were also discernable other than images of physical suffering. Examples include an image of a woman devastated by the earthquake, a shattered look on her face while she is sitting near the debris of a collapsed building (January 13th ,2010), another example include image of hapless children sitting along the road waiting for medical help(January 14th , 2010). Images from *TheNew York Times* on the other handfocused solely on theinjuries sustained by the disaster survivors (physical suffering). Examples include an image of an injured boy waiting for medical help (January 15th ,2010), images of injured and stricken Haitians waiting for medical care (January 17th 2010 and January 21st ,2010), an injured Haitian writing in pain as she is being treated for her injured and infected leg (January 23rd ,2010). *The New York Times* also includedImages of Haitian men, women and children who had lost a limb (with amputated body parts) – image of a father and his injured son (January 23rd, 2010) **(Figure 13.)**, image of an injured Haitian woman who has lost her fingers, (January 24th ,2010), image of a boy whose leg has been amputated (February 13th, 2010), image of Haitians losing limbs after the earthquake (February 23rd , 2010), a Haitian waiting for X-rays at a hospital in Port-au-Prince. Her right leg was amputated after the January earthquake (April 13th , 2010).Images from both papers were actual physical injuries sustained by the survivors. However, in almost all the above mentioned circumstances, the wounds were treated and were not left uncovered. In other words, an absence of graphic representations of open and untreated wounds was clearly discernable in the papers' portrayal of the physical sufferings of disaster survivors from Haiti.

For the survivors of the Japanese earthquake and tsunami it was more of a psychological distress or psychological trauma rather than actual physical injuries. Japan was in need of "psychological first aid" (USA Today, 2011) more than any other types of aid. This was evident from the images in *TheNew York Times* highlighting the survivors' facial expressions and "dejected body postures". Examples include, the plight of the displaced residents of Natori in Miyagi Prefecture (March 13th ,2011) , and the image of a resident trying to gauge the extent of damage to her property, also published on March 13th,2011, image of a woman sitting and grieving amongst the debris (March 14th,2011), evacuees gathered around a candlelight – their faces reflecting desolation and another image also published on the same day was that of a grief-stricken survivor mourning the loss of his wife and children (March 15th, 2011), image of a man who is heart-broken at the sight of his collapsed house and of losing his mother (March 18th, 2011) **(Figure 14.)**.

A similar trend was observed for *USA Today* – there was a complete lack of visuals pertaining to the physical sufferings (physical injuries and wounds) of the disaster survivors. Instead, for the most part, *USA Today* ran images that focused on the psychological distress of the earthquake and tsunami survivor. Examples include, image of a woman sitting amongst the ruins looking hapless in the coastal town of Ofunato, Iwate Prefecture (March 14th , 2011) and an image of a man who appeared devastated while looking for his house, also published on March 14th ,2011, a man consoling a heartbroken woman (March 15th, 2011)and an image of two survivors reuniting at a shelter in Miyagi Prefecture also published on the same day, image of an elderly man crying in front of his sister-in-law's house which is now in a state of rubble published between (March 18th- 20th ,2011) **(Figure 15.)**, and image of a grief-stricken woman (April 12th , 2011). Niitsu et al., (2014) found that other than damage to a survivor's property (partial or complete damage to houses), extreme anxiety about radioactive contamination was also regarded as an independent and additive factor which possibly exacerbated the psychological distress of an earthquake and tsunami survivor. Both papers published images that highlighted survivors being scanned for radiation.

For the Nepal earthquake, *USA Today*, for example, ran very few visuals that focused on the psychological trauma or distress of the displaced civilians or survivors. Examples include —A displaced Nepalese family gathered at a shelter in Kathmandu (April 30th, 2015), Nepalese residents mourning at a relative's cremation (April 27th, 2015) **(Figure 16.)**,anda displaced woman holding her child while sitting in an open area (May 13th, 2015). *TheNew York Times* also ran few visuals that gave prominence to the plight of displaced civilians. Examples include survivors holding on to each other and their faces reflecting extreme despair (April 26th, 2015) **(Figure 17.)**, image of an elderly female survivor pictured with her male neighbor (May 20th, 2015).

The next similarity was the papers' portrayal of the Haitians and the Japanese praying for the dead and the departed souls. For the Haitian earthquake, *USA Today* ran a visual on January 18th, 2010, where a woman and a group of other Haitians were praying near the collapsed National Cathedral, the next image was that of a woman and children praying at a church service in Port-au-Prince (January 25th, 2010), the third image also showed a group of Haitians praying at a church service in Port-au-Prince (January 27th, 2010) **(Figure 18.)**. Similarly, *TheNew York Times*also ran a visual on January 18th, 2010 **(Figure 19.)**which showed a group of Haitians praying next to the collapsed National Cathedral, the next image was also that of a group of Haitians praying (February 13th, 2010) and the third image was that of Haitians praying at a nightly Catholic service at a refugee camp (March 22nd, 2010). In all the above instances Haitians were depicted as praying with outstretched hands looking up into heaven.

For the Japan earthquake, *USA Today* ran a visual where a man, his wife and two daughters were praying for the man's deceased grandmother (March 21st , 2011). Another image published between March 18th -20th, 2011showed a Japanese soldier praying and the image published on March 30th, 2011 **(Figure 20.)**showed the Japan Ground Self-Defense Force praying for victims at a mass grave in Miyagi Prefecture. In all these images, the Japanese were depicted as praying with hands folded. *TheNew York Times* on the hand ran no identifiable images that were coded for this visual category. Similarly, for the Nepal earthquake, both papers ran no identifiable images that were coded for this visual category. The above-mentioned images indicate strong religious overtones in the visual coverage of the two disasters.

Theme 2: Rescue operation in progress

Images coded for this theme included local rescue workers or relief workers involved in rescue efforts rescuing survivors trapped under the rubble, rescue workers carrying injured civilians or retrieving bodies from the rubble or rummaging through the rubble looking for survivors as well as officials screening survivors for radiation (in case of the Japan earthquake and tsunami)and the images of US missionaries waiting to rescue hapless children and images of US volunteers (in case of the Haitian earthquake). The images also demonstrated the formal relief efforts organized by police officers, soldiers, firefighters and depicted them in various action shots highlighting their heroism (Jackson, 2011, p. 190). Several images also showed how the US military and other foreign search and rescue teams played a crucial role in saving lives.

Both papers ran the maximum number of visuals for the "local rescue operation in progress" sub-theme and the "military intervention – local" sub-theme in case of the Japan earthquake **(see Table 3.).** Japan received aid offers from 69 countries (VOA News, 2011), but Japanese soldiers and troops, Japan's Self-Defense Force, and the Tokyo Metro police officers played an active role in the search and rescue operations which could be a plausible explanation why both papers ran the maximum number of visuals for this sub-theme.Both papers also ran the maximum number of visuals for the "foreign search and rescue team" sub-theme in case of the Haitian earthquake. That is to say, Haiti received the maximum amount of aid and assistance from the international community. More than 20,000 US civilians (missionaries and volunteers) and US military personnel were deployed to offer assistance to the stricken country (The White House, 2010). Other than the US, the papers depicted rescue teams from other countries such as Chile, Belgium and Cuba together with UN soldiers who were also involved in the search and rescue operations. For the Nepal earthquake, the papers depicted foreign rescue teams from India and Japan.

One similarity between all three disasters that is worth mentioning was the papers' portrayal of the role played by the US military. The US military's presence was strongly felt in Haiti (11 images) **(Figure 24. and 25.)**followed by Japan (3 images) **(Figure 26.)**and Nepal (2 images) **(Figure 27.)**. The US military almost always plays a pivotal role in disaster response operations by providing assistance, available resources, logistical capacity and operational services to civil communities abroad during both man-made and natural disasters (Kapucu, 2011, p. 7-8). The US military is usually involved in several response and recovery operations such as:

> Search and rescue; emergency medical care; emergency transport of people; mass feeding; in-kind distribution of food, clothing, andother necessary commodities; epidemiological work and diseasecontrol; decontamination (in hazardous materials or radiologicalcircumstances); temporary sheltering; firefighting; help in restorationof electric power and other utility services; debris removal to reopenroads; and bridge repair or temporary bridge replacement, as wellas offer security and property protection aid (Sylves, 2008, p.172).

The papers' portrayal accurately represented these aspects of the US military in disaster response for all three disasters.

Theme 3: Material destruction

Images categorized under the material destruction or damage to the infrastructure theme highlighted the degree of "brokenness" of each of the disaster sites. Some images simply showed piles of debris or rubble and were indicative of a consistent and recurring theme of disorder, uncertainty and the randomness of destruction (Jackson, 2011, p. 181) brought about the earthquakes. Other images documented the demolition of the National Palace, the destruction of the Ministry of Finance building in case of Haiti **(Figure 28.)**, the wrecking of iconic tourist attractions such as the Dharahara Tower **(Figure 29.)** and Basantapur Durbar Square in case of Nepal, and images of the heavily damaged Fukushima Daiichi power plant **(Figure 30.)** and the Sendai airport in case of Japan. These images of disorder and destruction aptly reminded one of a "kind of siege" (Jackson, 2011, p. 183) brought about by nature rather than by man-made causes such as wars, coups or terrorist attacks **(see Table 4.)**.

Theme 4: Victim portrayal

This theme was one of the lowest frequency categories referenced by both papers and included images such as shrouded corpses, partially covered corpses, coffins, images of mass cremation, burial and funeral in process. The newspapers however refrained from showing very graphic portrayals of blood-spattered victims (see Table 5.).

One similarity betweenall three disasters that is worth mentioning was the papers' portrayal of mass cremation and mass funeral or burial. *TheNew York Times* ran a total of three imageswhile*USA Today* ran only one imagedepicting mass cremation for the Nepal earthquake **(Figure 31.)**. For the Haitian earthquake **(Figure 32.)** both *TheNew York Times*and *USA Today*published a total of one image each. For the Japan earthquake **(Figure 33.)**, *TheNew York Times*published a total of two imageswhile*USA Today*ran no identifiable images coded for this visual category.

It is a common misconception that corpses or dead bodies represent an "epidemic hazard" if not immediately cremated or buried. Therefore, mass cremation, funeral or burial is a common sight during the post-disaster phase. Goyet (2000), found that "the myth that dead bodies cause a major risk of diseases, as reiterated in all large natural disasters …, is just that, a myth."

Moreover, it has never been scientifically proven that there is a direct relationship between corpses and epidemics (WHO, 1999). This is because people dying from the direct effects of war, famine or natural disasters is dissimilar to people dying from infectious diseases. (European Commission, n.d., p.135). Rather than posing a health hazard, the biggest risk associated with dead bodies is that of the mental health of the disaster survivors. Survivors or the residents of an affected country often have the cultural and social obligation of retrieving and taking care of dead bodies other than looking for makeshift shelters and finding medical aid for themselves. However, as it happens in most cases, the precipitous and often unceremonious disposal of dead bodies only adds to a disaster survivor's trauma. (European Commission, n.d., p. 136). Also, the sight of open mass graves and dead bodies strewn across the streets could be equally traumatic for survivors. Therefore, the process of mourning and burial or funeral or cremation is regarded as highly significant and emotional for the bereaved family members and friends.(European Commission, n.d., p. 138). Both papers accurately portrayed the mourning process and the mass funeral and cremation processes for all three disasters.

Return to normalcy

Duringthe initial days after the disaster, the papers illustrated general chaos and disorder together with the search and rescue operations in full swing.Images of cities and towns that were scarred, broken and torn were also clearly discernable. In the weeks and months that followed the disasters, the papers ran visuals (although few) that suggested a gradual but slow return to normalcy. Some images illustrated how disaster survivors from Haiti and Japan were going about their daily lives and were supporting and helping those in need down the path to recovery. This few instances reminded us of cooperation and fraternité (Jackson, 2011, p. 187-188). For the   Haitian earthquake, *USA Today published* an image on February 2nd, 2010 that showed a survivor start a driver-translator service despite losing his wife in the quake (emphasizing the idea of fraternité) **(Figure 21.)**, in another image a group of children is playing near a camp in Haiti (April 1st, 2010), and in the third image *USA Today*depicted a happy reunion of a newborn child with her parents (April 7th, 2010). *TheNew York Times* also ran visuals that emphasized the return to normalcy theme or topic. For example, an image published on January 22nd, 2010 showed Haitians vending small bags of coal while another image also published on the same day showed an open-air market where a woman was taking money for cabbage. An image published on January 25th, 2010 shows a woman who opened a restaurant a week after the quake offering food to other fellow Haitians (emphasizing the idea of fraternité). Images published on January 28th, 2010 showed a man having a haircut and two girls playing patty-cake. Other examples include, first-graders singing "Frère Jacques" as a school prepared to open in Port-au-Prince (February 4th,2010), Haitian children playing in the sun at their tent camps (February 21st , 2010), and images of a group of children dancing at a day care program run by the French Red Crossand children taking classes in a tent camp in Port-au-Prince (March 7th , 2010), In another image a group of Haitians was overseeing the laying of a house foundation (again emphasizing the idea of fraternité) (March 17th , 2010) **(Figure 22.)**.

As for the Japan earthquake, the return to normalcy topic or theme was much more muted and was not as obvious as the Haitian earthquake but was nonetheless present. *TheNew York Times*, for example, published three separate images of children attending an elementary school graduation ceremony (March 23rd, 2011). In one of the images a look of despair and hopelessness was clearly visible on the children's faces as they were waiting to receive their diplomas and in another image, a glum-looking father was holding on to his dead's son photo while attending the ceremony and in the third, a look of uncertainty was clearly visible on a 12-year old boy's face as he was receiving his diploma **(see Figures, 38, 39 & 40)**. All three images were published within days of a country being struck by multiple disasters and therefore each of the survivors depicted in the pictures were going through an immediate post-disaster phase of hopelessness, numbness, and extreme grief and therefore were unable to respond adequately to an occasion that symbolizes hope and new beginnings. Also, all three images were diametrically opposite to the images of children published in *TheNew York Times* for the Haitian earthquake. In another image, published on March 26th, 2011 a man and his son were giving free haircuts to other survivors (emphasizing the idea of fraternité) **(Figure 23.)** and in a second image published on May 11th, 2011, residents of Kawauchi were allowed to visit their homes briefly after two months. The residents were wearing protective gears and appeared to be strangers in their own homes. They had to practice extreme caution while salvaging their belongings. Lastly, for the Japan earthquake, *USA Today*ran no identifiable images that were coded for this category. Also, no identifiable images from both papers were coded for this category for the Nepal earthquake.

Although these few examples did remind the readers or the target audiences that normal life was gradually reasserting itself in the midst of catastrophic events (Jackson, 2011, p. 189), but in other instance images of extreme grief and suffering would reemerge and jolt the audiences back to reality reminding us that the road to recovery was indeed a long drawn out process.

Visual Symbolism

Research Question 3 asked to what degree did the newspapers use visual symbolism (symbolic images) to construct visual narratives of the three disasters. Newspaper coverage of the three disasters brought to light some of the symbolic dimensions of the coverage. Therefore, this section will discuss in detail the symbolic dimensions of an image pertaining to the disasters and the countries affected by the disasters.

In their coverage of the Haitian earthquake *USA Today*, ran a visual on February 4th, 2010 that showed a destroyed Ministry of Finance building (see Figure 28.). The building not only symbolized structural damage but was also symbolic of a dent in the country's economy. Haiti remained perpetually dependent on foreign donations to meet their basic subsistence level and with the collapse of a government structure Haiti will be ever more reliant on international aid agencies (The New York Times, 2015). In another example on February 2nd, 2010*USA Today* depicted a group of Haitians carrying a cross to be erected near a mass grave. The cross itself alludes to Christian symbolism **(Figure 34.)**.

The New York Times on three separate instances (January 18th, 2010, February 13th,2010, March 22nd, 2010)(**see Figure 19.)** and*USA Today* also on three separate instances (January 18th , 2010, January 25th , 2010 and January 27th, 2010) **(see Figure 18.)** published similar images which portrayed Haitians seeking "spiritual solace" in times of crisis. It was as if the Haitians were trying to lean onto the "emotional succor of religious faith" (Koenig & McConnell, 2001,p. 220). The Haitians were praying collectively at a time when the country and its population were struck by an earthquake of great magnitude which exacerbated their already pitiful conditions. Praying collectively also comes as no surprise since close to 80 percent of the Haitian population is Roman Catholics and therefore believed in the healing power of faith (US Department of State, 2007). The Haitians were probably praying for the lives lost and were praying with a hope to realign their lives once more (Tikkun, 2010).

Another noteworthy image from *TheNew York Times* (February 3rd, 2010) showed two men helping a woman head load a bag of rice**(Figure 35.)**. It is a common practice in many developing countries to carry heavy loads on the back, shoulder, and head. This specific image, however, allows for an alternative interpretation – and that is of the subordination of women. Women in Haiti are treated unequally and inferiorly and acts of active discrimination remain ingrained in the Haitian culture even to this day (Chery, 2011,p. 253). This particular image from *The New York Times* further reinforces this stance and is symbolic of the differential treatment of males and females in Haiti. *TheNew York Times* ran two other visuals (January 31st, 2010 and February 8th, 2010) and in the first image a group of women are carrying head loads and were going about their business and on the other, women were again carrying head loads while the men stood and watched. *USA Today* also ran a similar visual (February 8th, 2010) which showed two women carrying a bag of rice from a UN World Food Program distribution site in Pétionville.

TheNew York Times ran a visual on February 14th, 2010 which showed the destruction of a Center of University and Professional Learning in Port-au-Prince (Haiti) **(Figure 37.)**. A similar image was published in *The New York Times* (May 15th, 2015) portraying a damaged school building in Nepal **(Figure 36.)**. Both the Haitian earthquake and the Nepal earthquake struck impoverished countries like Haiti and the mountainous regions of Nepal reducing hundreds of smaller villages into ruins. With the collapse of the internal infrastructure, the school buildings and the centers for learning were heavily affected. Education has significant value in these under-resourced countries because it will eventually help mitigate and help fight poverty and is likely to spur economic growth, reduce hunger in the long run, and help fight diseases like HIV (Results, 2009) especially in case of Haiti. Haiti has close to 130,000 people living with HIV (UNAIDS, 2015). Collapse or the destruction of the school buildings in case of Nepal and centers for learning in case of Haiti is symbolic because it will drive these countries back to the antediluvian age. Schools, in general, are symbolic because they help in the culturization process and molds new generations into "one society with shared national identity" (Long-Crowell, n.d.). The destruction of school buildings in case of Nepal is symbolic of the collapse or the fragmentation of this national identity.

In its portrayal of the Nepal earthquake, *TheNew York Times*, for example, printed approximately three images (April 27ᵗʰ, 2015, April 29ᵗʰ, 2015 and May 5ᵗʰ, 2015) which highlighted survivors either preparing to cremate dead bodies or survivors witnessing a mass cremation in progress**(see Figure 31.)**.Cremating the dead is symbolic of Hinduism where it represents the "ephemerality of bodily life", that life itself is transient (Daily Mail, 2015). Nepal has a Hindu majority and these depictions in *The New York* Times accurately highlighted Nepal's funeral practices. Similarly, *USA Today* also ran a visual on April 27ᵗʰ, 2015 that illustrated a mass cremation in progress. On May 3ʳᵈ, 2015 *TheNew York Times* published an image which showed the residents of Bhaktapur discovering an intact rice container from amongst the ruins of their house **(Figure 38.)**. Rice is the staple dish of the Nepalese just like many other Asian countries and being able to salvage this food item from the rubble offered a glimmer hope to the residents of this stricken country since emergency aid and care was hard to come by during the initial days of the disaster.

For the Japan earthquake, *TheNew York Times*published three images on March 23ʳᵈ, 2011which highlighted an elementary school's graduation ceremony in progress. One of the photographs illustrated a group of elementary school children looking despondent while waiting to receive their diplomas **(Figure 39.)**. A dark uncertain future awaits them. It is quite likely that many of the children participating in the ceremony probably lost everything in the quake. The second image depicted both parents and children attending the ceremony. The focal point in this image is that of a crestfallen father holding his dead son's photograph **(Figure 40.)**. In the third image, it was difficult to miss the dispirited look on a 12-year-old boy's face holding his diploma **(Figure 41.)**. Graduation ceremony has symbolic meaning since it marks the end of a chapter in a graduate's life and heralds the beginning of another but in each of these three instances it represented the dichotomy of life – on oneside there is hope for the future but on another side there is a constant feeling of hopelessness and coming to terms with the death and loss of loved ones.

On March 25ᵗʰ 2011, *TheNew York Times*,for example, published an image of a woman **(Figure 42.)** examining a can of whale meat that her daughter had found from amongst the rubble in Ayukawahama, a whaling town which was close to the epicenter of the March 2011 earthquake (The New York Times, 2011). Whale meat had been an integral part of the Japanese cuisine between the late 1940s and mid-1960s but its consumption had sharply declined over the years (BBC News, 2016). This particular town, however, continued its whaling tradition and eating whales remained a primary part of Ayukawahama's local culture even when the rest of the nation had given up on its consumption (The New York Times, 2011). The can of whale meat has symbolic meaning in this context and the woman in the picture was clearly pleased to discover this food item which offered a glimmer of hope to the native of a Japanese town which was famous for whaling and whale consumption.

In another image from *TheNew York Times* (March15th, 2011) a group of survivors is pictured sitting around the candlelight their faces reflecting uncertainty **(Figure 43.)**. Most of the survivors are seen staring at the candlelight. The light from candle symbolized a possible triumph over darkness, hope in times of despair and trouble. The light although insignificant compared to the darkness engulfing the room, signified that all is not lost. But nonetheless, it also points towards the enormity of the disaster and that the path to recovery will be a long-drawn-out process.

In yet another image from *TheNew York Times*, a survivor is seen holding onto a portrait of a former neighbor who was now dead (April 2ⁿᵈ, 2011) **(Figure 44.)**. The photograph in this context served as a representation of a neighbor who was no longer alive. Photographs "reflects the thing it signifies" (Hirsch, 2015). Photographs also translate into memory and function as a physical remnant, a souvenir, a precious artifact of what had been (Anwandter, 2006, p. 3). This photograph of a dead neighbor will probably play a paradoxical role in the life of this survivor. On one hand it is reminiscent of the times before the disaster – of what had been and on the other hand, it will symbolize the catastrophic events that changed the course of her life.

Praying is symbolic of the Japanese culture. News images from *USA Today* accurately depicted this aspect of Japan's spiritual tradition where a soldier (March 18ᵗʰ -20ᵗʰ, 2011), some survivors (March 21ˢᵗ, 2011) and members of the Japan Ground Self-Defense Force (March 30ᵗʰ, 2011) **(see Figure 20.)** were praying for the deceased in three separate instances. In the image especially of the survivors (a man, his wife and two daughters) praying for the deceased (the man's grandmother) who was a victim of the tsunami – other than praying ,the survivors also left oranges, drinks and sweets for the deceased in the ruins of their house**(Figure 45.)**.

According to the Japanese funeral practices, families and relatives of the deceased are obligated to help prepare the deceased for their soul's journey to "The Pure Land" (Salvaggio, 2011). This particular image from *USA Today* again accurately depicted the Japanese funeral traditions.

USA Today published an image on March 16th, 2011 where the Statue of Liberty replica is depicted as surveying the damage caused by the tsunami **(Figure 46.)**. This national monument is one of the most recognized symbols of America. It has symbolic value in this context because as her official name suggests, "Liberty Enlightening the World", it was true that the US media (like other Western media) played a crucial role in appraising international communities with disaster related stories and images. The presence of a US symbol in Japan also highlights the depth of American-Japanese Trans-Pacific Partnership and the fact that both countries share a deep mutual respect for one another (Stokes, 2015). And on the same day*USA Today* published an imageof a Japanese manga character **(Figure 47.)**.Manga "is at the heart of Japanese pop culture" (The Japan Times, 2009) and the image of the character standing tall amid the debris surrounding it symbolize the permanence of the Japanese culture despite the damages caused by the earthquake.

Between March 18th-20th, 2011 *USA Today* published an image of a religious statue (or a divine object) standing amid the rubble surrounding it in Miyagi Prefecture **(Figure 48.)**. A divine object is symbolic of the Japanese religious traditions, has nthropomorphic characteristics and is much revered. Divine objects feature prominently in Japanese religion (Shinto and Buddhism) and are believed to possess special abilities such as the "power to create, enrich, prolong, or renew any form of life" (Hara & Masakazu, 2003) and in this particular context its presence seems to be safeguarding the Japanese people in times of crisis. On March 15th, 2011 *USA Today* published an image of a damaged temple at Natori in Miyagi Prefecture **(Figure 49.)**. Temples have symbolic importance in Japanese religions and signify areas of worship, for carrying out ritual ceremonies and serve as cultural centers. Damage to the temple structure not only represents architectural damage but also symbolizes a disturbance or a disruption in the fulfillment of spiritual functions and signifies Japan's cultural loss (The Huffington Post, 2015).

On March 31st, 2011 *USA Today* published an image of a priest holding a casket which had the remains of a tsunami victim **(Figure 50.)**. The casket or the urn has symbolic meaning in this context since it signifies Japanese funeral practices. There are three stages to a Japanese funeral tradition – the wake (where guests offer their condolences to the family members of the deceased), the cremation service where bodies are cremated and the remains or the ashes of the deceased person are transferred to an urn or a casket. The casket or the urn is either handed over to the family members to place the ashes at a family grave or are handed over to a temple priest (Hammond, 2001). This news image from *USA Today* accurately reflects this aspect of the Japanese funeral tradition.

CONCLUSION

This study aimed to highlight the dominant overarching theme that was commonly referenced by *TheNew York Times* and *USA Today* across all three disasters. The study also brought to the fore significant differences and similarities between the images analyzed from both papers. By exploring the papers' selective and repetitive portrayals of the catastrophic events and the people affected by those events this study has been able to examine the dominant news framings on the informational, affective and symbolic levels (Parry, 2011, p. 1197).

All three earthquakes represented a kind of an inversion of the "psychological and spatial order" (Jackson, p. 183) depicted through images of disarray, destruction, and disorder.

These images collectively represented an "episode in the life of the [affected] city as a whole" (Jackson, 2011, p.187-188). These images of collapse and ruin reminded us about the indomitable forces of natures and that modern human life was not beyond the controls of the environment (Jackson, 2011, p. 192). Other images portrayed the idea of "convergence" where people and resources came together in times of crisis to alleviate pain and suffering. It was the convergence of local rescue workers, first responders, aid workers helping to rescue the stricken countries and its population (Jackson, 2011, p. 192). In some studies, these restorative activities of the relief organizations, aid agencies and foreign search and rescue teams predominate (see, Ali 2015; Borah 2009) while in others such as this particular study, the imagery of social breakdown (Ploughman,n.d. p. 365) and survivor portrayal dominated overall.

From a theoretical perspective, this research adds to the literature on visual framing in general and visual framing of natural disasters in particular. However, due to the subjective nature of new images, analyzing visual frames can be challenging (Fahmy& Kim, 2008, p. 459) but Daniela and Rodriguez's (2011) four-tier typology played a substantive role in overcoming this methodological challenge. Therefore this research provided both the American and global audiences with accurate visual representations of what went on in the weeks and months following a disaster.

One glaring drawback that emerged from an examination of new visuals was that both *TheNew York Times* and *USA Today* consistently ran very few images of the Nepal earthquake. Many plausible factors could have contributed towards this — journalistic values of newsworthiness, news-processing routines, resources limitations and reliance upon official sources (Ploughman, p. 365) but given the papers' elite standing as members of the premier press in the US and globally (Fahmy& Kim, 2008, p.448) some of the factors might seem a tad improbable. Therefore, one limitation of this study was the inability to determine exactly what factors prevented consistent coverage of all three disasters and especially Nepal. Future research could include in-depth interviews with photojournalists and photo editors to gain insight into the determinants or factors of foreign news coverage in the US media. Future research could also look into an even larger sample and a larger sampling period to study the shifts in the visual coverage of all three disasters – in other words to study if both Haiti and Japan continued to be treated   with such intensity and if Nepal continued to receive differential treatment.

Another drawback is that this study examined only two newspapers and did not include other reputed and widely circulated papers from the US or the Western media. Also, both *The New York Times* and *USA Today* were not representative of the entire gamut of newspapers in each and every country or a country's media systems (Fahmy& Kim, 2008, p. 459) but both publications nonetheless have a global presence. Comparative visual analysis of English national dailies from each of the affected countries together with a wide array of papers from other Western media outlets would have added another dimension to this research and would have allowed for a more comprehensive comparative research on the Western media systems, the media systems of the affected countries and their visual framing choices.

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APPENDIX

Figure 1. January 16, 2010, p. A9N.Damon Winter/The New York Times

Figure 2.*USA Today*, January 26, p. 5A. By Jewel Samad, AFP/Getty Images

Figure 3.*TheNew York Times*, March 16, p. A1. Mike Clarke/Agence France Presse – Getty Images

Figure 4. April 5, p. 2A.ByCalum MacLeod, *USA Today*

Figure 5.*USA Today*, January 29-31, p. 5A. By Ramon Espinosa, AP

Figure 6. January 27, p. A1.Ozier Muhammad/ The New York Times

Figure 7.*USA Today*, February 15, p. 4A. By Roberto Schmidt, AFP/Getty Images

Figure 8. January 23, p. A4N. Damon Winter/The New York Times

Figure 9. March18-20, 1A. By Andrew Burton for USA Today

Figure 10.*TheNew York Times*, March 28, p. A11N. Masanobu Nakatsukasa/Yomiuri Shimbun, via Associated Press

Figure 11.*TheNew York Times*, April 27, p.A9N. NiranjanShrestha/Associated Press

Figure 12. January 20, p. 1A. By Jack Gruber, USA Today

Figure 13. January 23, A7N. Ruth Fremson/the New York Times

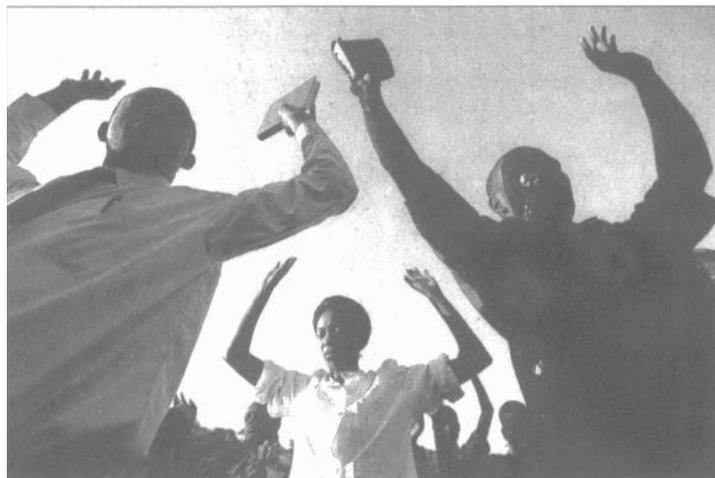**Figure 14.***TheNew York Times*, March 18, p. A11N. Yomiuri Shimbun via AFP – Getty Images

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Figure 16.*USA Today*, April 27, 8A.PrakashMathema, AFP/Getty Images

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Figure 19. January 18, p. A1. Ruth Fremson/The New York Times

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Figure 22. March 17, p. A4N. Damon Winter/The New York Times.

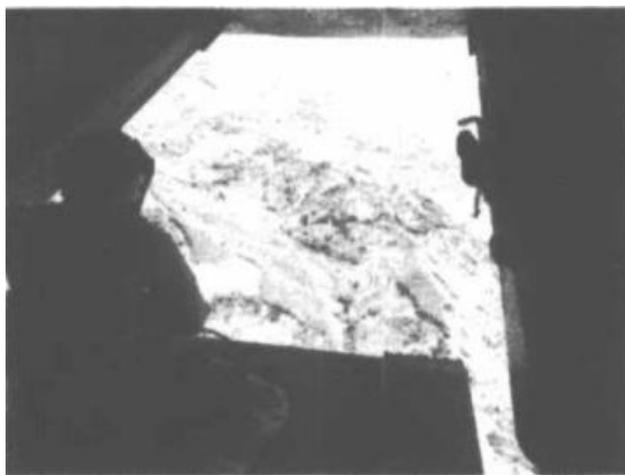**Figure 23.**The *New York Times*, March, 26, p. A11N. Shiho Fukada for the International Herald Tribune

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Figure 25.January 27, p. A8N. Damon Winter/The New York Times

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Figure 28. February 4, p. 5A. By Ken Dilanian, USA Today

Figure 29.*USA Today*, April 29, p. 2A.NiranjanShrestha, AP

Figure 30.ial*USA Today*, March 18-20, p. 1A. Tokyo Electric Power Co. via AP

Figure 31.*TheNew York Times*, April 27, p. A1.NarendraShrestha/European Pressphoto Agency

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Figure 38.*TheNew York Times*, May 3, p. 10N.HemantaShrestha/European Pressphoto Agency

Figure 39.*TheNew York Times*, March 23, p. A1. Shiho Fukada/The International Herald Tribune

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Figure 40.*TheNew York Times*, March 23, p. A15N. Shiho Fukada/The International Herald Tribune

Figure 41.*TheNew York Times*, March 23, p. A15N.

Figure 42. March 25, p .A7N. Ko Sasaki/The New York Times

Figure 43.*TheNew York Times*, March 15, p. A11N. Kyodo News via Associated Press

Figure 44.April 2, p. A6N.Ko Sasaki/The New York Times

Figure 45. March 21, p. 6A. Andrew Burton for USA Today

Figure 46. March 16, p. 1A. Calum MacLeod, USA Today

Figure 47. March 16, p. 6A. Calum MacLeod, USA Today

Figure 48. March 18-20, p. 8A. By Nicolas Asfouri, AFP/Getty Images

Figure 49.*USA Today*, March 15, p. 5A. Alex Hofford, European Pressphoto Agency

Figure 50.*USA Today*, March 31, p. 6A-7A.