

NEWSPAPER COVERAGE OF THE FLINT WATER CRISIS: AN EMPIRICAL ANALYSIS  
TO SUPPORT A NEW MODEL FOR LATENT ENVIRONMENTAL DISASTERS

By

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A THESIS

Submitted to  
Michigan State University  
in partial fulfillment of the requirements  
for the degree of

Journalism – Master of Arts

2017

## **ABSTRACT**

### **NEWSPAPER COVERAGE OF THE FLINT WATER CRISIS: AN EMPIRICAL ANALYSIS TO SUPPORT A NEW MODEL FOR LATENT ENVIRONMENTAL DISASTERS**

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The Flint Water Crisis was a catastrophic disaster that reflects a previously, undefined pattern within human caused, slow-onset environmental crises. This pattern includes awareness, activism, governmental denial, and early signs of a legitimate, environmental hazard. This research defines the pattern as the Human Catalyst, Latent Disaster Model (HCLDM). The model is supported through review of mobilization frames, slow-onset environmental disasters, and incidents of environmental injustice. The model describes the predictable flow of latent disasters at various levels within society – the media, residents, government, and scientific community.

This qualitative analysis of local, state, and national newspaper coverage of the Flint Water Crisis provides empirical support for the model. The analysis measures the concepts of significance, source bias, and environmental injustice through the lens of the normative theory of social responsibility. It found relationships between source-types and topics of environmental injustice consistent with a review of other incidents of latent environmental disasters. The findings help support the HCLDM as a predictive framework for study and offer a much-needed means of prediction for scholars, journalists, communities, and public health officials.

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## **ACKNOWLEDGEMENTS**

I would like to acknowledge my thesis chair, Professor Manuel Chavez, and reviewers, Professor Geri Zeldes, and Professor Eric Freedman for their insight and contributions to this research and for their continued guidance and mentorship. I would also like to recognize the residents, researchers, journalists, and governmental officials who devoted themselves to the pursuit of justice over Flint's contaminated water supply. Most of all, I thank my family for their continued support, patience, and love. I dedicate this thesis to them.

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## KEY TO ABBREVIATIONS

DFP - *Detroit Free Press*

DEQ - Department of Environmental Quality

EM - Emergency Manager

EPA - Environmental Protection Agency

FJ - *Flint Journal*

HCLD - Human Catalyst Latent Disaster

HCLDM - Human Catalyst Latent Disaster Model

MDHHS - Michigan Department of Health and Human Services

MDEQ - Michigan Department of Environmental Quality

NYT - *New York Times*

SDWA - Safe Drinking Water Act

TTHM - Trihalomethanes



## CHAPTER 1: INTRODUCTION

The Flint Water Crisis describes a slow-onset disaster in Flint, Michigan, that began with changes to the public water supply in April 2014. The city stopped buying water from Detroit and began drawing from the Flint River – a cost-cutting measure decided by a state-appointed emergency manager who was employed to resolve the city’s debt (*Flint Water Advisory*, 2016). However, the Flint Utilities Department lacked training in treatment protocols and subsequently, the water was left without a critical chemical to prevent corrosion of pipes (Torrice, 2016).

Residents complained about discolored and foul-tasting water within months of the switch. The problems were most prominent in homes with aging pipes and service lines that contained metals like lead and copper (*Flint Water Advisory*, 2016). Improper treatment methods also damaged the city’s infrastructure, and residents were exposed to bacteria, trihalomethanes, and lead (Hanna-Attisha, LaChance, Sadler, & Champney Schnepf, 2016; *Flint Water Advisory*, 2016). Deaths from Legionnaires’ disease also increased (Sadler, LaChance, & Hanna-Attisha, 2017).

Government officials publicly dismissed the concerns of residents even after two studies in August and September 2015 provided evidence of lead leaching into homes (Hanna-Attisha, et al., 2016; Roy, 2015). Officials acknowledged the problem only after independent analysis by the *Detroit Free Press* supported the scientific findings (Kaffer, 2015). The city declared a state of emergency in December 2015. President Barack Obama signed an order that declared a federal emergency a month later.

A task force assigned to investigate described the crisis as an act of environmental injustice against one of the most disenfranchised communities in the nation (*Flint Water Advisory*, 2016).

The facts of the Flint water crisis lead us to the inescapable conclusion that this is a case of environmental injustice. Flint residents [sic] did not enjoy the same degree of protection from environmental and health hazards as that provided to other communities. (*Flint Water Advisory*, 2016, p. 54).

The effects of the disaster were catastrophic in terms of human health and infrastructure. Lead remains in the bones and brain following exposure and can cause cognitive delays, hyperactivity, and chronic health problems (Cederna-Meko, Hanna-Attisha, & O'Connell, 2016; Healy & Bernstein, 2016). Estimated repair costs to replace the city's infrastructure, including household service lines, totaled more than \$275 billion (Dolan, 2016).

The normative tradition establishes the role of the media within society (Lasswell, 1948; Merton, 1948; Glasser, 1998). The theory has several descriptions with varying levels of media responsibility. These include providing information, becoming a forum for opinions, and offering "critique through the watchdog function" (Christians, 2009, p. 123). The normative tradition within democratic society, by its strictest definition, calls for "social responsibility," which requires that journalist become aggressive "watchdogs" by presenting the voice of the people, seeking answers, and uncovering governmental corruption (Christians 2009, p. 30; Lasswell, 1948; Glasser & Ettema, 1987; Siebert, Peterson, & Schramm, 1956). By these principles, the media would bear some responsibility if it remained inactive or favored the governmental position when widespread injustices occurred within its community.

The mainstream media failed to achieve its normative function of social responsibility within the Flint Water Crisis until scientists intervened. Recent analysis of *Google* searches indicates the demand for information regarding Flint's water supply spiked in August 2014 as consecutive boil water advisories were issued, and interest remained through September 2015 when it again spiked after recognition of lead contaminants (Matsa, Mitchell, & Stocking., 2017). The findings indicate the community sought answers months before recognition of the

slow-onset crisis.

Such incidents of watchdog failures are common in latent environmental crises in which the government's financial interests are placed above the health of residents. Recent examples in which government entities failed to communicate a suspected crisis and dismissed concerned residents include an incident of toxic emissions from Bullseye Glass in Portland, Oregon, in 2016 (Profita & Schick, 2016), the Gold King Mine spill near Silverton, Colorado, in August 2015 (Paul, 2016; Wegrzyn, 2016), and the discovery of widespread asbestos-related deaths in Libby, Montana, in 2002 (Schneider & McCumber, 2004). Adam (1998) cites the media's failed role during latent environmental crises in her research regarding the Mad Cow Disease crisis in Britain in the 1980s through 1990s.

Who but journalists would interpret for them scientific findings, academic papers and the bureaucratic jargon of national and international policy? In a context where neither the government nor business is trusted, who could residents turn to for interpretation and analysis of all the debates and contradictory findings? (Adam, p. 169).

According to scholars Nixon and Rice, social injustice is a common thread within latent disasters caused by environmental neglect or exploitation (Nixon, 2009, 2011, 2015; Rice, 2016). These scholars are critical of the media for its failed role in uncovering corruption through over-reliance on official sources. This reliance is historically considered a news value used to establish legitimacy (Bennett, 1990; Gans, 1980). Flint's water crisis investigative task force found complaints of residents were dismissed by state and local officials who denied the problem existed, concealed evidence, and placed the city's financial interests over the health of residents (*Flint Water Advisory*, 2016; EPA Hearings; 2016; Hearings Wrap-Up, 2016). This demonstrates that legitimacy of official sources cannot be blindly accepted and that source bias that favors officials who impede transparency can result in tragic consequences.

Elite sources have a vested economic, financial, or social interest in maintaining the status quo. Therefore, journalists may promote governmental or corporate interests through source selection (Gans, 1980). The result is a schema, or news frame, that offers dismissal and reassurance, which causes in a delay of official recognition and response during latent disasters, and can have catastrophic consequences (Adam, 1998; Nixon, 2011, 2015; Wilkins & Patterson, 1987). According to Rice (2016) “absent efforts to rhetorically make visible [sic], powerful actors will continue to possess the latitude to foster doubt, diversion, and denial—complicating broader recognition” (Rice, 2017, p. 179).

It is necessary to recognize the Flint Water Crisis was not ignored by journalists at the local, state, or national level even before official recognition of the lead contamination. Coverage included conflict among governmental officials who argued the return to Detroit water was cost-prohibitive and activists who opposed paying for foul water. This coverage began more than a year before the federal government declared a state of emergency on January 16, 2016 (*Flint Water Advisory*, 2016; *President Obama Signs*, 2016). Flint’s local newspaper, the *Flint Journal*, published hundreds of stories during that period. Flint’s water troubles were also reported in the *Detroit Free Press* and *New York Times*. Local, state, and national coverage included recognition by both activists and official sources that the water was corrosive, discolored, and foul, in addition to containing trihalomethanes, a contaminant with known health risks (*Flint Water Advisory*, 2016; EPA Hearings; 2016; Hearings Wrap-Up, 2016). City government and utility officials insisted the water remained safe to drink, and therefore the exposure continued without remediation. Clearly, media organizations had knowledge of the environmental injustice occurring in Flint, but to what extent did their reliance on official sources legitimize the position that consuming foul-smelling, brown water was safe? Source selection is a primary element

considered in evaluation of news frames as these sources deliver the message that becomes salient (Boyle, McLeod, & Armstrong, 2012; Chan & Lee, 1984; Gitlin, 1980; Spyridou, 2015).

Thus far, published research on the Flint Water Crisis includes topics within the fields of health (Gostin, 2016; Healy & Bernstein, 2016; Nelson, 2016), science (Abernathy et. al, 2016; Edwards & Pruden, 2016; Oleksy, 2016), social justice (Butler, Scammell & Benson, 2016; Hammer, 2016; Ranganathan, 2016), and governmental accountability (Gabaldón, Chavez, & Tunney, 2016; Chavez, Gabaldón, Tunney, & Nunez, in print; Miller & Wesley, 2016). Current research lacks emphasis on the role and responsibility of the media; therefore this research contributes to understanding how newspapers covered the threat and how it relates to other HCLD events.

The research extends beyond the empirical case study of Flint to develop the Human Catalyst Latent Disaster Model (HCLDM). The proposed model combines studies on environmental justice, latent disaster, and mobilization to assist in categorization of frames in the Flint Water Crisis and future HCLD events. The model identifies various levels of actors, including activists, scientists, and governmental officials. The model differentiates between official source-type in terms of *support* and *denial* officials, both of which were prominent actors in the review of HCLD events. The differentiation between official types is critical as mobilization research indicates movements gain more traction when individual officials in the government adopt an advocacy position (Dobson, 2001).

This research employs categorization of the Flint crisis through the HCLDM to investigate frames in coverage by the *New York Times*, *Detroit Free Press*, and *Flint Journal* with emphasis on the frequency of source-types included in each article and the effect of source-

type on the topics of disenfranchisement, dismissal, and crisis. The period of analysis is from January 1, 2015, when the city declared a Safe Drinking Water Act violation (*TTHM Notice*, 2015; *Flint Water Advisory*, 2016) through January 23, 2016, a week after President Barack Obama declared a federal emergency in Flint (*President Obama signs*, 2016). This analysis helps establish validity for the HCLDM.

The next section provides background of the circumstances preceding the Flint Water Crisis, including a timeline of major events and the public or government response. Subsequent sections include a review of frame analysis literature, which draw upon previous research on mobilization, latent environmental disasters, and environmental injustice to form the HCLDM. This establishes the categorical variables applied within the present frame analysis. The research then employs a Kendall's tau-b analysis to establish significant relationships between source presence and topic presence. The research concludes with a discussion of the results, implications for the HCLDM, and recommendations for journalists to use active reporting in the latent stage of environmental disaster through use of the predictive model. This active reporting can lead to intervention within the latent stage of the disaster and facilitate earlier recognition.

## CHAPTER 2: BACKGROUND

The Flint Water Crisis attracted widespread, national attention in late December 2015 as a catastrophic incident of environmental injustice. The disenfranchised residents of Flint, Michigan, were exposed to dangerous contaminants in their drinking water for more than a year while governmental officials callously dismissed their complaints (*Flint Water Advisory*, 2016). It took the results of two scientific studies and independent analysis by the *Detroit Free Press* before officials acknowledged the threat of lead leaching from household pipes due to the corrosive water leaving the plant.

The Flint Utility Department disconnected from the Detroit Water and Sewage Department and connected to the Flint River as the public water source in April 2014 as a temporary measure to cut costs while the construction of a new, “more affordable” pipeline was completed (*Flint Water Advisory*, 2016). The decision was made by a state-appointed emergency manager who controlled Flint’s spending in an effort to resolve the city’s financial crisis that amounted to a \$14 million financial deficit (*Flint Water Advisory*, 2016). In addition, Flint’s crime and poverty rates were among the worst in the nation and unemployment levels stood above the state average (*Flint Water Advisory*, 2016). African Americans made up 56.6% of the city’s population and overall, 60% of residents were minorities (*Population estimates*, 2015), which placed residents at high-risk of the environmental injustice that followed (Boyle, McLeod, & Armstrong, 2012; Nixon, 2011, 2015; Pellow, 2000).

The cost-cutting measures continued after the switch as the utility company worked with inadequately trained staff and failed to follow appropriate water treatment, testing, and monitoring protocols. That resulted in a sequence of contamination notices, including presence of *E. coli*, caused by water main breaks; trihalomethane (TTHM), caused by a chemical reaction

between high chlorine levels and contamination in the system; and legionella, a bacteria that causes the potentially fatal Legionnaires' disease (Edwards & Pruden, 2016; *Flint Water Advisory*, 2016; Hanna-Attisha et al., 2016; Roy & Edwards, 2016; Schwake, Garner, Strom, Pruden, & Edwards, 2016). City officials insisted the water was safe as it left the plant, even after the Department of Environmental Quality (DEQ) cited the city for violation of the Safe Drinking Water Act (SDWA) for high levels of TTHM (*EPA*, 2015; *TTHM Notice*, 2016), which posed a threat to those with compromised immune systems and a cancer risk with extended exposure (Chowdhury, 2013).

The SDWA violation in January 2015 spurred formal mobilization within the city. The SDWA requires the EPA to set safety standards for public water systems (*EPA*, 2016). Flint's violation resulted from high levels of TTHM, which is a chemical byproduct caused when chlorine reacts to organic matter (Sivaganesan & Clark, 1998). The violation acted as a notice for the utility to reduce TTHM levels, but the levels were not considered dangerous for consumption by healthy individuals. Activists argued they should not be forced to pay for foul water that some said was causing skin rashes and other health problems (*Flint Water Advisory*, 2016 Hanna-Attisha et al., 2016). They attended city meetings armed with bottles of brown and murky tap water to demand the city return to Detroit water (Fonger, 2014b). City officials insisted the move would be too costly and discoloration and particulate contamination existed only in individual homes (Ketchum, 2015).

Organized mobilization included the creation of activist groups that held public meetings, non-disruptive marches, and protests at Flint City Hall (Fonger, 2015a). Activists increased their demands on public officials in the months that followed as the problems worsened due to continued corrosion, but the emergency manager, mayor, and utility company continued to



assure residents the water was “safe to drink,” even after the city government began supplying bottled water to employees and visitors (*Flint Water Advisory*, 2016; Fonger, 2015a; Fonger, 2015b; Fonger, 2015c). A consultant contracted by the city recommended corrosion control to improve the look of household water, but dismissed residents’ complaints, stating: “It’s less about the water itself and more about the pipes. You’re just getting debris flushed out of the pipes. You don’t want to drink it because it looks bad” (Fonger, 2015b; *Veolia: Flint Michigan*, 2015).

The activism attracted the attention of a well-known water researcher. His team from Virginia Tech presented findings in late August 2015 that concluded almost half of the homes tested had high levels of lead (Roy, 2015). Flint residents were being exposed to lead through service lines and household plumbing, even though the water leaving the plant was considered of acceptable quality. A few weeks later, a team of researchers led by Flint pediatrician Mona Hanna-Attisha released data that correlated elevated blood-lead levels in children to the switch to the Flint River as a water source (Hanna-Attisha et al., 2016). The research indicated dramatic increases of lead poisoning, which carried permanent and unknown long-term effects such as behavioral problems, learning problems, and reductions in I.Q. (Hanna-Attisha et. al., 2016).

City officials dismissed the research until media reports forced them to acknowledge the lead risk. The *Detroit Free Press* published a story confirming the city’s own data supported the findings of Dr. Hanna-Attisha and her colleagues (Kaffer, 2015). In October, Flint announced it would return to using water from the Detroit Water and Sewage Department. A series of disaster declarations followed. The city declared a state of emergency in early December 2016 (*State of Emergency*, 2015). In January 2016 -- 20 months after the water switch -- the state of Michigan and federal government signed emergency declarations that provided funding for bottled water,

filters, and the replacement of pipes and service lines (*President*, 2016; *Flint Water Advisory*, 2016). It came on the heels of a report by the Michigan Department of Health and Human Services that exposed a spike in deaths from Legionnaires' disease following the switch to the Flint River water supply (Minicuci, 2015; Schwake et. al, 2016).

The Flint Water Advisory Task Force was assigned to investigate the crisis (*Flint Water Advisory*, 2016). The task force found widespread blame and concluded the state-appointed emergency managers (EM) failed to:

...seriously consider a return to DWSD (Detroit water), in part because MDEQ (Michigan Department of Environmental Quality), local staff and their consultants assured the EMs that there was nothing seriously wrong with the water [sic] . . . the facts in this case point to the reality that the state government, as the entity in charge of Flint decision-making, failed to protect the health of the city's residents (*Flint Water Advisory*, 2016, p. 40).

This task force also concluded officials offered "callous and dismissive responses to residents' who expressed concern" (*Flint Water Advisory*, 2016, p. 2). However, the errors went beyond dismissal and misinformation. *The Flint Journal* used the Freedom of Information Act to discover that the utility company violated the SDWA by failing to test older homes, which are most at risk of having lead pipes (Fonger, 2015d). In addition, subsequent investigations showed the utility company and Michigan Department of Health and Human Services (MDHHS) provided inaccurate reports to conceal findings of contamination and emails revealed that the delays and misinformation by officials were intentional (*Flint Water Advisory*, 2016). Blame fell on the governor, state-appointed emergency managers, the MDHHS, the regional EPA, and utility officials (*Flint Water Advisory*, 2016). Numerous civil and criminal lawsuits against these officials followed (Moore, 2017). Estimates to repair the city's infrastructure, including more than 20,000 service lines have totaled more than \$275 billion (Dolan, 2016). Unfiltered tap water remained contaminated with lead more than a year later.

Newspapers covered the crisis throughout the period from the switch to the Flint River water source through the federal emergency declaration. However, the media failed to expose the widespread devastation through failure of its normative function of social responsibility to investigate beyond the official statements to uncover false reports, governmental cover-ups, and improper testing protocols (Chavez et al., in print; Gabaldón et al., 2016). *The Flint Journal* published hundreds of articles, including what were later cited as “clues” of legitimate problems with the city’s water (Table A). These included, corrosion of parts at a General Motors plant (*Flint Water Advisory*, 2016; Fonger, 2014), University of Michigan-Flint water tests that revealed lead was leaching from older plumbing (*Flint Water Advisory*, 2016; Schuch, 2015; Torrice, 2016), and the city-hired consultant’s report that chemicals to prevent corrosion would reduce particles and improve the quality of household water (*Flint Water Advisory*, 2016; Veolia, 2015).

**Table 1:**  
**Timeline of Major “Clues” Prior to the Crisis**

Date	Event
April 25, 2014	City of Flint moved to Flint River water source.
August 2014	Water main ruptures began, triggering a series of boil water advisories. Officials blamed problems on aging infrastructure (Adams, 2014).
October 13, 2014	A Flint General Motors’ manufacturing plant announced it would no longer use city water due to corrosion (Fonger, 2014).
January 21, 2015	Residents with bottles of dirty tap water packed a city meeting to complain about water quality (Fonger, 2015f).
February 9, 2015	University of Michigan-Flint announced lead was corroding from fixtures in several buildings on its Flint campus (Schuch, 2015).

**Table 1 (cont'd)**

March 12, 2015	Veolia North America released a report that discussed corrosion. “Corrosion Control – The primary focus of this study was to assure compliance with the TTHM limits. That is not the only problem facing the city and its customers though. Many people are frustrated and naturally concerned by the discoloration of the water with what primarily appears to be iron from the old unlined cast iron pipes. The water system could add a polyphosphate to the water as a way to minimize the amount of discolored water” (Veolia, 2015).
June 3, 2015	Resident Melissa Mays was quoted in <i>The Flint Journal</i> , expressing concern over lead, “‘The smell and color are way worse than last year,’ said Mays, who said that high copper and lead levels in some areas are also a worry” [article ends] (Fonger, 2015e).
July 9, 2015	Michigan ACLU reporter presented a documentary regarding lead found in a resident’s water. The documentary included a leaked EPA memo titled “High Levels of Lead in Flint” (Levy & Guyette, 2015).
August 2015	Virginia Tech researcher Marc Edwards released results of lead tests that found lead within 40-percent of the homes tested (Roy, 2015).
September 21, 2015	Pediatrician Dr. Mona Hanna-Attisha released a study showing elevated blood lead levels among the city’s children (Hanna-Attisha et al., 2016).
October 16, 2015	Flint returns to Detroit Water and Sewage Department.

*The Flint Journal* continued to publish stories touting the government’s response that the water was safe despite these clues, local, state, and national news reports, and the ongoing complaints by residents. The newspaper’s reporter assigned to city government later described his frustration in a radio interview:

If I wrote it once, I wrote it 100 times. The city and the state’s response was the water is fine. It’s tested and it meets all of the health and safety requirements of the law. They didn’t exactly say, ‘You people are crazy,’ but they said there's nothing wrong with the water - Ron Fonger (Gordy, 2016).

The *Detroit Free Press* and *New York Times* also published stories prior to the discovery of lead that acknowledged residents’ complaints about the discoloration and taste of the water, in addition to the presence of TTHMs (Erb, 2015; *Flint Water Advisory*, 2016; Smith, 2015). Still, the problems persisted without investigative media intervention until scientists became involved.

The failure to investigate beyond official sources draws criticism among both media scholars who research news frames (Iyengar, 1996; Gans, 1979, 1980; Glasser & Ettema, 1987; Goffman, 1974) and those who study incidents of mobilization and environmental injustice (Amenta, Gharrity Gardner, Celina Tierney, Yereña, & Elliott, 2012; McLeod & Hertog, 1999; Nixon, 2011, 2015; Rice, 2016). They cite the media's bias toward official sources to provide context and legitimacy prevents residents' voices from being heard and promotes the often financially centric position of government to maintain the status quo.

Chapter 3 reviews the literature on news frames of mobilization and environmental injustice in the context of HCLDs. This review helps establish conceptualization methods to further investigate the role of source-types in the Flint Water Crisis and evaluate how source selection correlates to story topics, both of which may have contributed to the delay in the discovery of lead.

Conclusively answering whether news organizations share the blame for delayed intervention in Flint presents a difficult challenge. However, this research demonstrates through quantitative methods how source selection related to positive and negative topics in newspaper content. In addition, this analysis creates a foundation for future research on the media's role in looming environmental disasters through use of the proposed HCLDM. Further understanding these relationships can also assist in developing a media model of environmental-public health reporting to identify areas most at risk, anticipate dangers, and circumvent delays in identification of future slow-onset, human-made crises.

## CHAPTER 3: LITERATURE REVIEW

### *3.1 Frame Analysis*

The concept of frames extends back to definitions presented by anthropologist Gregory Bateson (1972) in his *Steps to an Ecology of Mind* in which he states frames determine our mind's interpretation of any given situation. Frames are presented through various means including images, words, phrases, and structures within the context of message (Carriage & Roefs, 2004; Chong & Druckman, 2007; Druckman 2004). Goffman (1974) states they provide a "schema of interpretation," which would otherwise render a situation meaningless.

Individuals integrate these frames into their own thought processes, often without knowledge of the action (Goffman, 1974). That is not to say that frames, alone, determine decision-making because individual judgements and preexisting beliefs and values must be considered (Gamson & Meyer, 1996; Pan & Kosicki, 2005; Sniderman & Theriault, 2004). Similarly, *framing* is the process in which the frames are formed (Johnson-Cartee, 2005).

Frame research extends beyond four decades, and frame analysis remains an important methodology in the study within the ever-expanding field of communication's knowledge (Matthews, 2009). Frame researchers evaluate how construction of any given news story places emphasis on certain aspects over others (Boyle, McLeod, & Armstrong, 2012). Framing studies encompass a spectrum of social science fields, including sociology, economics, political science, and psychology, creating theoretical and methodological approaches involving both qualitative and quantitative research (Borah, 2011). Social science researchers increasingly value frame analysis as a method to explore the meaning given an issue through journalistic presentation of images, actors, and messages (Matthes, 2004; Wahl-Jorgensen, & Hanitzsch, 2009). D'Angelo and Kuypers (2010) state the attraction of social scientists to the concept of frames is that it

serves as a way for scholars to develop and scrutinize “the perils and possibilities of the media’s role as a political actor in the deliberative settings of policy making, political and social activism, and campaigns” (p. 357).

An overall conceptualization of frame research remains lacking despite its popularity in scholarly research (Borah, 2011; Carragee & Roefs, 2004; de Vreese, 2005). D’Angelo (2002) argues that is neither possible nor ideal, given the various contributions each field affords to the broader understanding. Historically, a consistent operational conceptualization in frame research is issue-specific in frame analysis (Matthes, 2009). Since the opportunity for research and analysis continually expands as technology evolves, values shift, and interests change, the argument for an issue-specific approach seems valid. Still, models may assist in understanding how frames presented within individual events, or evaluated through a case study, may apply to a broader understanding of the phenomena.

### ***3.2 News Frames***

The concept of frames within communication science often includes analysis of how the media frames content (Entman, 1991, Gans, 1979; Gitlin, 1990; Goffman, 1974). Sociologist Todd Gitlin (1980) describes frames as “persistent patterns of cognition, interpretation, and presentation, of selection, emphasis and exclusion” that journalists use to package large amounts of information in a way that is easily understood (p. 7). News frames are subjective choices in the presentation that depend on the individuals who create the content. They include sources, tone, visual, and audio elements. Frames also include emphasis through story placement and length. Therefore, news frames are unavoidable “principles of selection, emphasis and presentation composed of little tactic theories of what exists, what happens, and what matters” within our world (Gitlin, 1980, p. 6). It can be asserted by this definition that the constructs of

frames are inclusion, the weight given to one subject over another, and structure. Considering all of the events that occur in a community, or the world for that matter, newsrooms could never report all of the stories, with each possible angle; therefore, a journalist selects the topics that will be included, filters the information he or she determines less relevant, and presents the information within the structure of a story. Frames are not consistent across all news media organizations as they are shaped by the norms within a newsroom, news values, and the priorities and interests of the decision makers. For example, one newsroom may place emphasis on stories with emotion, while another may value a more hard-news approach to the facts. The same topic, told by two different news organizations, may be drastically different depending on what sources are used, what content is excluded, and the order in which the content appears.

Communication scientists argue the construction of news frames has a direct effect on society (Callaghan & Schnell, 2005; Entman, 1993; Gamson & Meyer, 1996; Nelsen, Clawson & Oxley, 1997). Entman (1993) says the prominent frames presented by the media have the greatest likelihood of being noticed and accepted by the receiving audience. He asserts a frame serves four possible functions within society: to “define problems,” “diagnose problems,” “make moral judgements,” and “suggest remedies” that predict the result of each course of action (p. 52). The investigation of frames is important in terms of how choices made by journalists impact the way society interprets their world (Kahneman & Tversky, 1984). News frame analysis often focuses on the “words, images, phrases, and presentation styles” that are used to construct news stories and the processes that shape this construction (Druckman, 2001, p. 227). In addition, specific words are often the “building blocks” of frames (Entman, 1993).

The task force investigating the Flint Water Crisis blamed elected and appointed government officials, as well as other government entities, for dismissing the concerns of



residents and failing to acknowledge the problem (*Flint Water Advisory*, 2016). In this way, the Flint Water Crisis can be considered in a political frame. Frame research indicates news media demonstrate preference to political forces; therefore, the content often reflects the views of elites (Callaghan & Schnell, 2005). Politicians can promote their own agendas through established relationships with journalists, organizational resources, perceived credibility, and access to open doors of communication (Callaghan & Schnell, 2005). The significance of preference toward political sources is not to be understated -- through a journalist's ability to select sources to provide content for stories, those sources gain access to frame issues to their own advantage and influence policy support (Callaghan & Schnell, 2005). Although the power to influence news frames varies among policymakers and the elite members of society, "experienced frame-makers or those with the skills of crafting and sponsoring policy frames, are more likely to have their frames accepted than those who are novices in such public deliberations" (Johnson-Cartee, 2005, p. 25).

Political sources often employ frames that protect economic or financial interests (Adam, 1998; Durfee, 2006; Johnson-Cartee, 2005; Nixon, 2011, 2015). The resulting news frame, becomes one of reassurance. Through frames of social and political issues, "news organizations declare the underlying causes and likely consequences of a problem and establish criteria for evaluating potential remedies of the problem" (Nelson, Clawson, & Oxley, 1997; p. 567 - 568). Official recognition is often hindered through dismissal in instances of looming environmental disasters in which recognition stands in opposition of economic interests, as was the case in Flint (Adam, 1998; Nixon, 2011, 2015).

Research finds local news frames favor the government or elite position more often than state or national media. Groups that present positions that conflict with these sources become

marginalized through story structure and prominence (Ettema, 2007). In addition, local journalism now primarily involves a reactive, not proactive, method of data collection, which may be an indication of a shift in norms over time that place less emphasis on quickly generating stories due to time constraints and limited staffing (Nielsen, 2014; O'Neil & O'Connor, 2008). In-depth and investigative stories stand in opposition of journalistic norms.

Gamson and Meyer (1996) concluded news reports are a primary means by which consumers attributed their conversations about political matters, the others being their own experience, commonly held beliefs, and the beliefs of others. Research emphasizes that since members of society cannot draw all information from personal experience alone, society depends on the media to provide context (Callaghan & Schnell, 2005; Gamson & Meyer, 1996; Nelsen, Clawson, & Oxley, 1997).

The dependency theory establishes there is an interconnection among the audience, the media, and the social system (Ball-Rokeach & DeFleur, 1976). It asserts the power of the media can assist a group's objectives by bringing problems to a larger audience through activation (Ball-Rokeach & DeFleur, 1976). Through dependence, the media assists primary sources in meeting objectives through its presentation of issues (Ball-Rokeach & DeFleur, 1976). Journalistic norms rely on government or elite sources, not the voices of non-elite residents, to offer legitimacy (Bennett, 1990; Gans, 1980; Schudson, 2001). Therefore, when members of society object to a widespread problem, those who lack resources to garner the attention of newsmakers may fail in obtaining their goals.

On the other hand, the media protects residents through frames that represent the concerns of society. Ball-Rokeach & DeFleur (1979) say a responsibility of the media is to "operate as a Fourth estate gathering and delivering information about the actions of

government” and serving as a “primary signaling system” (p. 6). This idea is an extension of the social responsibility model within the normative theory which describes the ideal way for the media to operate within a democratic society is to hold themselves accountable through content that extends beyond “fact reporting” to critical analysis and interpretation of the statements and motives of elites (Christians, 2009; Siebert, Peterson, & Schramm, 1956). News frame analysis finds frames that challenge the elite position can motivate those in power to shift power positions to maintain favorability within the mass audience (Linsky, 1986). Political actors often equate the views expressed in news reports as public opinion; therefore a frame that favors an activist group may lead to social change (Callaghan & Schnell; Cohen 1986; Kennamer, 1994). The media can elevate itself to a more valued status through social responsibility (Sievert, Peterson, & Schramm, 1956). In a time of decline in both the public’s trust in the media and apparent governmental transparency, this seems more important than ever.

In summary, frame analysis research demonstrates the importance of evaluating sources and the relationship of sources to the contextual topics presented in individual stories and in content as an aggregate, as these selections create saliency. Journalistic norms often depend on government or elite sources to establish legitimacy (Bennett, 1990; Gans, 1980; Schudson, 2001). This source bias challenges the journalistic ideals of objectivity by offering official sources an elevated platform on which to frame issues (Boyle, McLeod, & Armstrong, 2012). Official frames can include ways of downplaying an event, delegitimizing claims, marginalizing activism, and presenting incomplete information about the scope of a group’s goals (Boyle, McLeod, & Armstrong, 2012; Chan & Lee, 1984; Spyridou, 2015).

One must put into context issue-specific frames before specific conceptualization of frame analysis is possible. Therefore, this research introduces the HCLDM to better understand

the Flint Water Crisis as a case of slow-onset, environmental disaster as compared to an independent event without context. Although the incident itself is unique, HCLD events are not. Such a model can assist in understanding the crisis in its context, and strengthen the argument for the variables of analysis.

The model is based on evaluation of other latent environmental disasters over the past 25 years (Appendix A). The model describes the flow of disaster from catalyst to recognized crisis, the actors in the disaster progression, and the response of those actors. The model helps establish a basis for the issue-specific and context-specific variables in the present study.

### ***3.3 HCLDM – A Model for Analysis and Prediction***

Disaster communication is a critical function of the media (Collins et al. 2012; Dovel, von Scheve, & Konijn, 2010; Houston, Pfefferbaum, & Rosenholtz, 2012; Littlefield, & Quenette, 2007). Coverage by news organizations assists communities with readiness, keeps them informed throughout the disaster impact, and provides information on resources during the aftermath. Not all disasters are the same. Hurricanes, floods, and tornados offer some level of predictability. Disasters such as plane crashes and oil spills offer less predictability, but newsrooms can operate under established norms that place emphasis on sudden-impact events with widespread consequences and dramatic images (Harcup & O'Neill, 2001; Rice, 2016; Strömbäck, Karlsson, & Hopmann, 2012). In such cases, newsrooms often work with political leaders to become mediators of the crisis communication and response.

Examples show this cooperation between newsmakers and the government in sudden-impact disasters is seldom present in latent environmental disasters. Latent disasters are a result of incidents such as human error, environmental neglect, industrial exploitation, or infrastructure deterioration (Nixon, 2015; Rice, 2016). Such disasters lack a single-focusing event in their

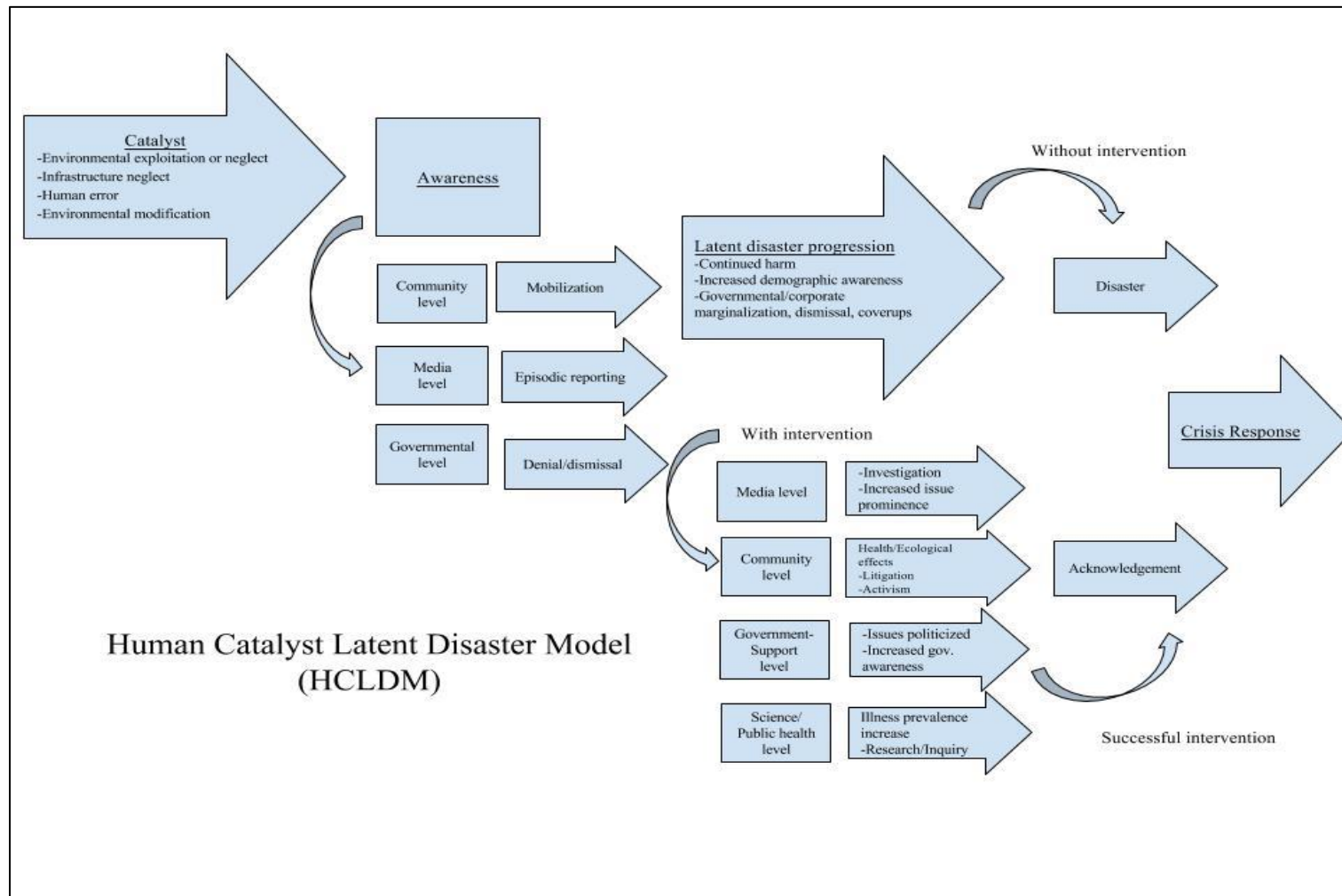
development, and often reach a crisis state before they receive widespread media attention (Adam, 1998; Nixon, 2011, 2015; Rice, 2016). Awareness is made difficult despite signs of obvious problems due to the injustices within the disadvantaged communities in which they are most likely to occur (Adam, 1998; Nixon, 2011, 2015).

Research lacks a clear conception of HCLD as a descriptive model that includes the progression from catalyst, through latency, and disaster recognition, including the human response at various levels within society. Therefore, this research aims to fill the void through the proposal of a new HCLDM. This explanatory model can also assist in forecasting latent disasters through evaluation of areas at risk, the warning signs, and through critical evaluation of episodic reporting.

The components of HCLD events must be understood in order to facilitate frame analysis. This understanding assists with better categorization of HCLD studies across the fields of social psychological research. This model was developed after a review of recent human-catalyst latent disasters, in addition to Nixon's (2011, 2015) proposed concept of slow violence, and studies of environmental injustice. The HCLDM can assist in conceptualization from the catalyst, through multi-level awareness and response at various hierarchical levels, to progression, and finally crisis recognition (Figure 1). It also represents how groups including residents, the media, scientists, and health officials often successfully intervene, as was the case in Flint. In addition to creating an outline for future analysis, this model can assist in establishing predictability in much the same way as weather forecasters assess situations and at-risk areas to determine looming threats.

Figure 1:

# Human Catalyst Latent Disaster Model



The HCLDM proposes the flow of such disasters at various levels within the community from the catalyst through the disaster recognition or event. The model presents the actors or *sources* involved during the flow of such crises and their responses during the stages of awareness and disaster progression. The model acknowledges there are relationships between the levels; however, responses vary among the actors. Through this model, we can better conceptualize the traditional media frames of HCLD.

The Flint Water Crisis is one example of such a crisis. The catalyst occurred following a human error that involved the failure to add a chemical to protect against corrosion. Human error is one example of an HCLD catalyst. Others include environmental neglect or exploitation. Following the error in Flint, three levels of awareness followed: the *community level*, the *media level*, and the *governmental level*. Residents and groups mobilized, media organizations began a series of episodic reports featuring water quality tests, public complaints, and denial and dismissal by governmental officials. Episodic, versus in-depth reports, can minimize the significance of frames. Continued harm occurred within the system as the latent disaster progressed, complaints continued, and geographic awareness spread to include larger newspapers and governmental officials who offered support. At the same time, officials who maintained the power continued to insist the water was safe.

The review of HCLD events demonstrated that scientists, politicians, and investigative journalists can intervene in the latent progression of HCLD through continued community mobilization to raise awareness. In Flint, this intervention included formalized activist groups, politicians, researchers, and public health officials. The most significant intervention began after a resident contacted a water quality researcher from Virginia Tech, who began independent testing (*Flint Water Advisory*, 2016). Almost simultaneously, a local pediatrician discovered a

pattern of high blood-lead levels in children that correlated with the move to the Flint River as a water source. This scientific evidence offered the media more legitimacy that public complaints were justified, which spawned further news media investigation that included critical evaluation of official sources. Government officials were forced to recognize the disaster and respond as a result. Flint's investigative task force credits this combined effort with circumventing a crisis of even further devastation (*Flint Water Advisory*, 2016).

The Flint water crisis is also a story, however, of something that did work: the critical role played by engaged Flint residents, by individuals both inside and outside of government who had the expertise and willingness to question and challenge government leadership, and by members of a free press who used the tools that enable investigative journalism. Without their courage and persistence, this crisis likely never would have been brought to light and mitigation efforts never begun (*Flint Water Advisory*, 2016, p. 1).

A second example that emphasizes the function of the media in HCLD intervention occurred in Libby, Montana in 2000. The community spent decades trying to bring awareness to deaths from lung-related problems. The suspected cause was an abandoned asbestos mine that once served as the community's primary source of income (*Agency for Toxic Substances and Disease Registry*, 2002; Schneider & McCumber, 2004; Schwarze, 2003). Hundreds formally mobilized, thousands of lawsuits were filed, and a grassroots effort purchased television advertising to gain attention (Barnett, 2000; Janofsky, 2000; Jones, 2001a, 2001b). Episodic stories about lawsuits ran in the local paper and the state's largest newspaper, the *Missoulian*, but overall, the local media failed to act (Matthews, 2000; Schwarze, 2003).

Consistent with the model, Libby residents faced economic hardship. More than 20% of residents lived below the poverty level, and unemployment stood at 15.6% (*U.S. Census Bureau*, 2010). Acknowledgement that toxic asbestos contaminated the town would further devastate the economy (Raymond, 2008; Schneider & McCumber, 2004).



The *Seattle Post-Intelligencer* finally impelled the government to act in 2000, reporting 192 mine-related deaths found through independent investigation using death certificates and other documents (Cooper & Brown, 2010; Matthews, 2000; Schneider & McCumber, 2004). Research later found lung-related deaths were 40% to 80% higher among mine workers and their family members as compared to the general population (*Agency for Toxic Substances and Disease Registry*, 2002; Naik, Lewin, Young, Dearwent, & Lee, 2016).

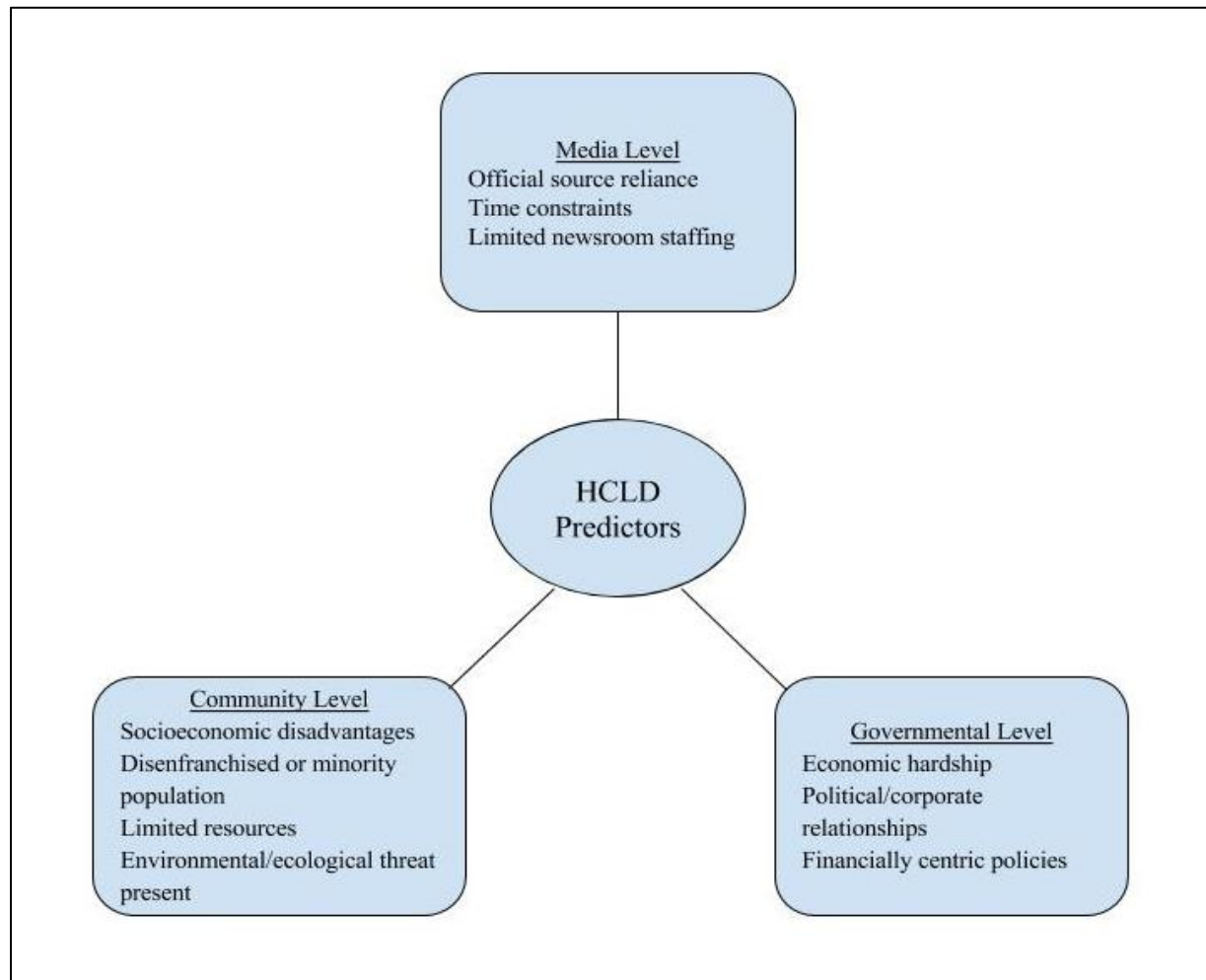
Deception delayed disaster recognition, as was also the case in Flint. The mining company had learned of the dangers in the 1950s, but concealed evidence (Raymond, 2008; Schneider & McCumber, 2004). The delay was blamed on economic motives and political incentives, as the mining company was a significant donor to the local Republican Party (Barnett, 2000). The U.S. Attorney General charged the mine owner with conspiracy and obstruction of justice, but charges were dropped after a 3-month trial (Cooper & Brown, 2010).

Other HCLD incidents follow this model of government self-interest, media failures, and environmental injustice. These include public complaints regarding coal ash ponds in Georgia (*Ash Pond Management and Closures*, 2015); a decade of unaddressed concerns about toxic emissions from Bullseye Glass in Portland, Oregon (Profita & Schick, 2016; *State of Oregon Programs*, 2016); the Gold King Mine disaster in Silverton, Colorado (Jargon, 2001; Paul, 2016), and the Washington, D.C., water quality crisis in the early 2000s (Cohn, 2005). Climate change events also fit this model as latent impacts such as famine, drought, and rising waters are disproportionately experienced in the most disenfranchised communities, but government and corporate interests impede protections (O’Lear, 2015; 2016). The commonalities among the events are consistent, while the details vary.

Analysis of HCLD events also presented a means for developing variables for prediction

of disaster threats within the community structure, the government, and the media, which can further assist in creating frame analysis (Figure 2).

**Figure 2:**  
**Predictors of Human Catalyst Latent Disaster**



Latent disasters are often considered a component of environmental injustice (Nixon, 2015; Rice, 2016). The theory of environmental injustice describes how disenfranchised communities face a greater likelihood of hazardous conditions in their environment as a result of the inequities between the residents and the power structure (Schlosberg, 2009, 2013). These communities often economically depend on the very hazard that poses harm (Nixon, 2015). The study of environmental injustice involves recognition of threats that face disadvantaged groups,

including awareness of their collective efforts to draw media attention to the problems (Maantay, 2002; Melosi, 1980; Novotny, 2000; Pellow, 2000). Rice (2016) states media attention is difficult to sustain for communities dealing with the threat of latent environmental disaster:

...even with the aid of scientific evidence illustrating a problem is underway. It is particularly difficult in communities already ignored by the broader society due to dynamics related to race and/or class; slow environmental violence is often intertwined with the unique characteristics of marginalized segments of society (Rice, 2017, p. 179).

The *community level* identifies demographic and economic frameworks that place a community at higher risk. HCLD events often occur in *minority* communities, or those faced with *socioeconomic disadvantage*, and *limited resources*. This disadvantage must be understood on a broader level, in that communities at risk may also be rural and predominantly white, but remain disenfranchised because of poverty, a lack of resources, or few connections to the governmental elite. On a larger scale, communities may be at risk due to current or recent economic strain such as recession. In addition, an *environmental* or *ecological threat* such as manufacturing or industry often exists (Nixon, 2015). It is often the case that such communities are economically supported by removal of natural resources or by environmental hazards such as industry or waste disposal (Adeola, 2000; Bell & Braun, 2010; Higginbotham, Freeman, Connor, & Albrecht, 2010; Mohai & Bryant, 1992; Pellow, 2000).

The residents of Flint were disenfranchised through economic factors, demographics, and crime. Population decline over the past several decades resulted in a loss of 100,000 -- or half -- of the city's population (*Flint Water Advisory*, 2016). U.S. Census data shows 57% of the remaining residents are Black or African American. Forty-two percent of Flint households live in poverty, with a median household income of approximately \$25,000 (U.S. Census Data, 2010). The city also fares poorly for overall quality of life, including poor health outcomes (*Flint Water Advisory*, 2016).

A primary function of government is to maintain a healthy economy; therefore, economic issues in a community often align with political issues (Hadley, 1989). At the *governmental level*, predictors include *economic hardships* in the community, strong *governmental-corporate relationships*, and *financially centric policies* (Adam, 1998, Nixon, 2015; Rice, 2016). These components create policies that protect the interest of government and corporations to avoid loss of revenue or excess spending (Adam, 1998; Desker, 2008; Nixon, 2015). That means problems will likely be faced by dismissal within disadvantaged communities. Nixon (2011) describes the challenge as “how can leaders be goaded to avert catastrophe when the political rewards of their actions will not accrue to them, but will be reaped on someone else’s watch decades, even centuries from now” (p. 6).

Examples of financially centric policy include governmental policies that favor industry or corporations over the environment, regardless of the potential damage that may result. A recent example includes an incident of toxic air pollution in Portland, Oregon. The EPA was notified by scientists that toxins were above acceptable limits in 2015, however residents were not notified until a newspaper broke the story a year later (Profita & Schick, 2016). The EPA did not inform residents because emission standards were not in place (Profita & Schick, 2016; *State of Oregon Programs*, 2016).

The *media level* warrants the most consideration. Its ability to intervene in a disaster is substantial, as are the consequences of failing to question official sources or independently investigate claims. At the media level, a newsroom’s economic obstacles and adherence to modern norms are predictors of the potential for HCLD. These include reliance on *official sources*, *time constraints*, and *limited budgets and staffing* (Bennett, 1996; Mayer, 2009; Scheufele, 1999). Risk increases in communities that rely on local media for attention, as these

are the most likely to function under these norms and restrictions (O'Neill & O'Connor, 2008). These factors prohibit the efforts and ability for newsrooms to devote time to investigate a story beyond its episodic context, which could indicate the legitimacy of a more widespread problem.

Newsroom norms rely on official sources to define and legitimize problems. Scholars criticize the media's coverage of latent disasters due to its overreliance on government sources who minimize concerns of the community (Adam, 1998; Nixon 2011, 2015; Rice, 2016). Media norms relating to activism can be even more detrimental to balanced portrayals within coverage (Chan & Lee, 1984). These structures include ways of downplaying the event, delegitimizing claims, marginalizing activists, and presenting incomplete information about the scope of a group's goals even within the wake of community mobilization (Chan & Lee, 1984; Spyridou, 2015). This marginalization is presented through bias in source selection, story prominence, and article length. Such decisions about presentation defines an issue's significance. Identifying the actors as part of the movement helps legitimize the group's goals (Amenta, 2012; Taylor & Gunby, 2016), therefore failure to do so can also be considered delegitimization.

Activism is of increasing interest to media scholars (Di Cicco, 2010). Activism is defined as an act of persuasion that is generally conducted to draw media attention (Gitlin, 1980; McLeod, 2007; McLeod & Hertog, 1999; Johnston & Noakes, 2005; Lipsky, 1968; Woulters, 2015). The definition indicates the community's dependence on the media for success. Activists require news media to effectively communicate perceived injustices to a wider audience. They are less likely to achieve their goals when deprived of media coverage (Johnson-Cartee, 2005; Johnston & Noakes, 2005). Scholars argue the media plays a pivotal role in mobilization and activism through allowing citizen agendas to be heard (Andrews & Biggs, 2006; Gitlin 1981). Schudson (1982) says the focus on such activist groups can force political actors to "behave as if

someone in the public is paying attention” (Ettema, 2007; Schudson 1982, p. 25). Research also offers evidence of how mobilization coverage has the power to shape political agendas (Iyengar, Peters, & Kinder, 1982; Johnson-Cartee, 2004; McCombs & Shaw, 1972; Donohue, Olien, & Tichenor, 1989).

Mobilization and activism events, being episodic, are more likely to trigger news coverage, yet the Flint Water Crisis provides an example that not all events attract equal interest, even in terms of formal protests (Boyle, McLeod, & Armstrong, 2012). Boyle, McLeod, and Armstrong (2012) conducted a content analysis of protests from the 1960s to 1990s and found the news media placed relatively little emphasis on social action protests, as compared to other issues, such as crime, war, and politics. The authors also found deviant and large protests generally garnered more media interest, but violent protests were more likely to face negative coverage (Boyle, McLeod, & Armstrong, 2012).

Iyengar (1996) uses the terms episodic (event) or thematic (general topic) to differentiate coverage of the protest from coverage of the ongoing activist-platform. Research demonstrates journalists are more likely to cover a protest as an event, rather than create an in-depth report on the activism’s purpose, platform, and goals (Iyengar, 1996). McLeod and Hertog (2012) found that this tendency to focus on event-specific coverage can result in a “freak frame” -- a condition in which the media delegitimizes the protester through frames focused on tactics and appearances. Chan and Lee (1984) refer to the protest paradigm as the established norms in a newsroom that, often unintentionally, lead journalists to frame content in a way that is detrimental to the protest groups. The lack of balance results in a decreased likelihood that the movement could affect social policy or create reform (Boyle, McLeod, & Armstrong, 2012; McLeod, 2007).

Protest groups function collectively to bring awareness to the political agenda, challenge ideas, and encourage social reform (McLeod & Hertog, 1999). Balanced frames are essential to the democratic process in terms of the way in which elites frame an issue and the public accepts the issue as framed (Zaller, 1992). In such a context, “the claims of protesters cannot simply be ignored or distorted by the audience-dependent mass media” (Walters, 2015, p. 492). This again emphasizes how society’s dependence on mass media extends beyond a source of details about events that transpired throughout the day. The dependence requires the need for presentation of issues that are important for community information and social change.

Protests in Flint usually involved small crowds with non-disruptive, visual tactics, which included handwritten signs and water bottles containing contaminated water. Research indicates that the small, non-disruptive crowds did not trigger substantial coverage. While unsuccessful activism is not a rarity, scholars have found frames of both activism and protests can have a large impact on the success of such a movement (Boyle, McLeod, & Armstrong, 2012; McLeod, 2007).

The Flint Water Crisis represents a period of extended activism without success. Therefore, analysis should consider source bias, story prominence, indicators of legitimacy, and social injustice. Chapter 4 describes the approach applied in this study.

## CHAPTER 4: METHODOLOGY

The purpose of this research is to identify how the *New York Times*, *Detroit Free Press*, and *The Flint Journal* framed the latent state of the Flint Water Crisis. It includes comparison of coverage across the three newspapers, as well as an evaluation of the coverage as an aggregate. The research evaluates concepts of issue significance, official source bias, and social injustice that are consistent frames found in HCLD. This research aims to identify whether local, state, and national newspapers marginalized concerns, delegitimized activists, and relied on officials to define the problem.

Specifically, through use of the proposed HCLD Model (HCLDM), the research investigates how the newspapers presented the latent stage of the Flint Water Crisis in terms of:

*Issue significance:* Article frequency, length, and placement in the newspapers.

*Official source bias:* Frequency comparison of sources including denial officials (those in the government who deny problems), support officials, (those in the government who recognize the problem and support the advocacy efforts), and activists.

*Social injustice:* Frequency of recognizing the community as disenfranchised, in addition to the recognition of the problem as a “crisis.” Social injustice also relates to frequency of inclusion of a protest event or identification of an activist in the context of an organized group.

This research also tests the relationship between source types and recognition of social injustice (the topic of disenfranchisement, dismissal, and crisis). This will help to establish the effects of source selection on frames.



#### ***4.1 Research Questions***

This research will answer questions about how newspapers framed the city's water problems in terms of placement, source use, and topics. In addition, it measures how sources included within the HCLDM relate to the topics presented. The answers provide empirical evidence to further validate the proposed HCLDM.

RQ 1: How did the *New York Times*, *Detroit Free Press* and *Flint Journal* coverage of the Flint Water Crisis between January 1, 2015 and January 23, 2016, relate to frequency of quote source presence including, *denial officials*, *support officials*, *activists*, and *scientists*?

Official source bias reflects how an issue provides legitimacy to those who are afforded the opportunity to speak directly to the audience through his or her own words, thus providing legitimacy to their platform. Research on frames predicts official sources will appear most frequently among the selected groups. Previous research also demonstrates local news coverage will have the greatest dependence on official sources. In addition, the HCLDM predicts the frequency of quote presence by an official source depends on whether the official supports or denies the message. This research predicts presence of denial officials will occur more than support officials. It also predicts presence of activist-quote sources will be less frequent than presence of both official types.

RQ 2: How did the *New York Times*, *Detroit Free Press* and *Flint Journal* coverage of the Flint Water Crisis between January 1, 2015 and January 23, 2016, relate to frequency of descriptive terms including *dismissal*, *disenfranchisement*, *crisis*, *activist group identified*, and the inclusion of a *mobilization/protest event*?

RQ 3: What is the relationship between the categorical variables of *denial officials* and the absence or presence of textual references to the individual variables of *dismissal*,

*disenfranchisement, and crisis?*

RQ 4: What is the relationship between the categorical variables of *support officials* and the absence or presence of textual references to the individual variables of *dismissal, disenfranchisement, and crisis?*

RQ 5: What is the relationship between *activists* and the absence or presence of textual references to the individual variables of *dismissal, disenfranchisement, and crisis?*

The HCLDM predicts a positive relationship between the presence of denial officials and dismissal, and a negative relationship with descriptions of disenfranchisement. It also predicts a positive relationship between both the presence of support official sources and activist sources, and the topics of disenfranchisement and crisis, and a negative relationship with dismissal.

Answers to these questions will assist in understanding how the newspapers framed the latent stage of the Flint Water Crisis in terms of prominence, source balance, and social injustice. The following section details the method employed within analysis.

## **4.2 Research Method**

This research employed a content analysis of consisting of a census of national, state, and local articles from the *New York Times*, *Detroit Free Press*, and *Flint Journal* from January 1, 2016, the date in which Flint was cited for violation of the SDWA, through a week following the federal emergency declaration. This period is significant because the SDWA violation spurred formal public mobilization, and the date of the emergency declaration finally recognized the significance of the crisis. A census is preferred when evaluating a specific event in newspaper analysis as it provides the most accurate depiction (Riffe, Lacy, & Fico, 1998).

The research employs frequency analysis to identify prominence, including article length, placement, source selection, and inclusion of the event-specific topics of disenfranchisement,

dismissal, and crisis. In addition, it identifies relationships between source-type and topic presence.

The research sought to distinguish differences among the national, state, and local levels. Newspapers were selected based on circulation. The *New York Times* is among the highest daily U.S. newspapers in terms of world-wide, print circulation. The *Detroit Free Press* has the highest statewide distribution in Michigan (Agility PR, 2016). The *Flint Journal* is a local newspaper with a primary emphasis on the Greater Flint area. The *Flint Journal* publishes five days a week; however, the printed edition is limited to Sundays, Tuesdays, Thursdays, and Fridays. This research examined print articles because the electronic and print editions were often found to duplicate content. Articles were collected through review of the newspapers on microfilm at the State Library of Michigan. Results were cross-referenced with *ProQuest* to improve the accuracy of the census. Columns, editorials, letters to the editor, wire service articles, images, and briefs (200 words or less) were excluded. Within these parameters, the *New York Times* generated only 17 stories in its print edition; therefore additional stories were obtained from the electronic version as identified with *ProQuest*. The search revealed a total census of 263 articles (N=263), with the vast majority (n =206) published locally by the *Flint Journal*. The total number of articles and distribution by newspaper is shown in Table 2.

**Table 2:**  
**Total Number of Articles within Each Newspaper**

Newspaper Source	n = Number of articles	% of articles
<i>New York Times</i>	19	7.2%
<i>Detroit Free Press</i>	38	14.4%
<i>Flint Journal</i>	206	78.3%
<i>Total N</i>	263	100%

Sociologist Erving Goffman (1974) concluded that frame analysis should include identifying categorical structures within the text and assigning them labels. Researchers have yet to construct a data matrix to apply across each individual news text and event (Wahl-Jorgensen & Hanitzsch, 2009). Framing research is often done through event-specific variables (Hertog, McLeod & Reese, 2001). This research incorporated a manual-holistic approach in that the review of the content established an event-type as described above in the HCLDM. The HCLDM allows for broader categorization of the crisis within a frame of environmental disaster; however, these variables also considered the specific context of Flint to ensure relevance. This methodological determination of the structural dimensions of frames assisted in development of the codebook for newspaper quantitative analysis (Pan & Kosicki, 1993; Simon & Xenos, 2000). The final codebook provided categorical analysis of variables, including article prominence, official source bias, and topics of social injustice.

The research was concerned with identifying absence or presence of specific sources who were quoted in each article; therefore, it did not measure sources who were paraphrased, but not directly quoted. In addition, the analysis consisted only of absence or presence per article and did not quantify the number of sources quoted. Multiple sources of the same type within an article were recorded simply as “presence.”

Table 3 provides an abridged codebook of variables and operationalism.

**Table 3:**  
**Codebook Variables and Operationalism**

Variable	Type	Definition	Operationalism
Newspaper source	IV	The newspaper in which the article appears.	1 = <i>New York Times</i> 2 = <i>Detroit Free Press</i> 3 = <i>Flint Journal</i>

**Table 3 (cont'd)**

Article placement	DV	A basic categorization of whether the article appeared on the first page, elsewhere in the newspaper, or online.	1 = Front cover 2 = Within newspaper 3 = Online
Article length	DV	Refers to the length of the article or approximate length if an exact word count was not listed.	1 = < 750 2 = 751 through 1000 3 = 1001 through 1250 4 = > 1250
Denial official	IV/DV	Quotes by a governmental official or entity who favors status quo, denies the problem, or resists change. This includes members of the water department, monitoring agencies, utilities, local, state, and federal government. Denial-officials may shift to support officials within the crisis. Code according to the position taken in each article. Include any official who expresses denial or resists change, regardless of conflicting positive or reassuring statements within an article.	0 = Absent/Unknown 1 = Present
Support official	IV/DV	Quotes by those officials in government who challenge the position of officials or actions of the denial or resistance. (Also see <i>denial-official</i> quote instructions.)	0 = Absent/Unknown 1 = Present
Activist	IV/DV	Quotes by activist are statements challenging the position of the government versus supporting status quo or governmental actions. Code those who attend meetings, organize events, or protest. Code known activists even if quoted outside of their activism role.	0 = Absent/Unknown 1 = Present
Scientific support	DV	Quotes by scientists, including medical officials, who challenge the position of the government versus supporting status quo or governmental actions.	0 = Absent/Unknown 1 = Present
Dismissal	DV	Incidents of dismissal, disrespect, or insults directed at the activist or mobilization efforts. Includes statements such as, the problems are not widespread, the scientific findings are inaccurate, and responses by officials that water is safe. Excludes background references to water problems, such as test results showed the water is safe to drink.	0 = Absent/Unknown 1 = Present

**Table 3 (cont'd)**

Disenfranchisement	DV	Include references to demographics, poverty, or crime statistics, and statements made regarding Flint's problems that are stated by the article or in the quote as being related to, or the cause of, the crisis.	0 = Absent/Unknown 1 = Present
Crisis	DV	Includes textual inclusion of the word "crisis" in the article including headlines, subheadings, and photo captions.	0 = Absent/Unknown 1 = Present
Activist group identified	DV	Absence or presence of activist group being identified by name in an article. Includes citizen, religious, and environmental organizations.	0 = Absent/Unknown 1 = Present
Reference to protest	DV	Inclusion of reference to a march or protest event in the story. Does not include mentions of previous protests (background) employed as a means to offer context to the crisis.	0 = Absent/Unknown 1 = Present

This research aims to further identify how the latent stage of the crisis was portrayed in terms of the conceptual frames of significance, source bias, and social injustice. Categorizations of these frames are further described in Table 4.

**Table 4:****Examples of Categorizations Provided to Coders**

Variable	Categorization	Example
Newspaper source	Independent variable	<i>New York Times, Detroit Free Press, Flint Journal</i>
Article placement	Frame: Significance	Front page or the internal section of the newspaper.
Article length	Frame: Significance	Length of the article (Approximate if word count is unavailable).
Denial-official	Frame: Source bias	Utility company, emergency manager, mayor, governor, spokespeople. "Michigan Department of Health and Human Services spokeswoman Angela Minicuci told the <i>Free Press</i> on Thursday that the increase was "seasonal and not related to the water supply." DFP - 9/29/15

**Table 4 (cont'd)**

Govt. support-official	Frame: Source bias	State representatives, Councilman Mays, Mayor Weaver, Democratic presidential candidates: "Our top priority has to be doing everything we can and finding every available resource to ensure access to safe water for Flint residents," Ananich's statement says. FJ - 9/24/15
Activist	Frame: Source bias	Those who were active against denial officials and status-quo, including their spokespeople. LeeAnn Walters, Melissa Mays, pastors, bottle drive organizers. "'My position remains the water is not safe,' she (Trachelle Young, attorney for activists) said Tuesday." FJ - 9-15-15
Scientific-support	Frame: Source bias	MSU researchers, Virginia Tech researchers, or others within the category of scientists. "Flint drinking water is 'very corrosive' and 'causing lead contamination in homes,' researchers from Virginia Tech University reported." FJ - 9-15-15
Dismissal	Frame: Social injustice	"A spokeswoman for Gov. Rick Snyder wrote in an e-mail that the Hurley data had been 'spliced and diced.'" DFP - 9/26/15
Disenfranchisement	Frame: Social injustice	"'It's a very sore point, particularly when you have a population with a high degree of low-income folks,'" Mr. Ambrose said." NYT - 3/24/15
Crisis	Frame: Social injustice	"City must abandon Flint River as drinking water source amid lead crisis."- DFP - 10-2-15
Activist group identified	Frame: Social injustice	Democracy Defense League, ACLU, Pastors for Social Action, Water You Fighting For: "I've taken to calling it poop water," said Nayyirah Shariff, a community activist for the grassroots group, Democracy Defense League. - DFP - 1/22/15
Reference to protest	Frame: Social injustice	Protest or march. "Advocates walked the 70-mile 'Detroit to Flint Water Justice Journey' from July 3 until Thursday afternoon." FJ -- 7/10/15

Two coders were employed to establish validity. The research used a random sample generated by the smartphone app, *Random Number Generator*. It consisted of 50 (approximately 20%) of the articles coded. This number is within the criteria recommended by Neuendorf

(2016). Coders were provided with code sheets and instruction. Definitions were adjusted to clarify disagreements between coders. After a training session that included open discussion, 10 articles from the sample were selected from each source based on various lengths, the coders independently completed the random sample. A Cohen's Kappa established the intercoder reliability was satisfactory, ranging from  $k = .0839$  (96.7%) to  $k = 1.0$  (100%).

The researcher used SPSS to conduct analysis of the findings regarding frequency and relationships between variables that indicate the concepts of issue prominence, issue significance, and social injustice. These are further described in chapter 5.



## CHAPTER 5: RESULTS

The research aims to answer questions about how the Flint Water Crisis was portrayed in the *New York Times*, *Detroit Free Press*, and *Flint Journal* in regard to the concepts of prominence, official source bias, and social injustice. The next section provides a brief summary of the results, followed by a more in-depth analysis.

### 5.1 Results Summary

The researcher conducted frequency analysis of articles by section and length (Table 5). Stories were located on the front page in less than half of the cases in each newspaper (*New York Times*,  $f=26\%$ ; *Detroit Free Press*,  $f=47.4\%$ ; and *Flint Journal*,  $f=42.7\%$ ). Articles were included in the inside sections of the newspapers by a slight majority (*New York Times*,  $f=63\%$ ; *Detroit Free Press*,  $f=52\%$ ; and *Flint Journal*,  $f=57\%$ ). This confirms the significance of the latent crisis was primarily limited to non-front page news; however, with the exception of *New York Times*, the margin was not considerable.

**Table 5:**

**Section Frequency by Newspaper**

Section			
Newspaper		Frequency	Percent
<i>New York Times</i>	Front Page	5	26.3%
	Inside Only	12	63.2%
	Web	2	10.5%
	Total	19	100.0%
<i>Detroit Free Press</i>	Front Page	18	47.4%
	Inside Only	20	52.6%
	Total	38	100.0%
<i>Flint Journal</i>	Front Page	88	42.7%
	Inside Only	118	57.3%
	Total	206	100.0%

In terms of word count (Table 6), stories between 200 and 750 words appeared most frequently in the *Detroit Free Press* (f=55%) and the *Flint Journal* (f=76.2%) versus the *New York Times* (f=26.3%); however, it is important to note that several wire stories were excluded from the *New York Times*. The *New York Times* featured stories between 1,001 and 1,250 words most frequently (f=31.6%). This reflects a low, overall significance given to the latent crisis in the amount of space given to an article, especially in the *Flint Journal*, and *Detroit Free Press*. The *New York Times* was more likely to provide depth, however, the sample was again limited.

**Table 6:**  
**Word Count Frequency by Newspaper**

Word Count			
Newspaper		Frequency	Percent
<i>New York Times</i>	Less than 750 words	5	26.3%
	750-1000 words	5	26.3%
	1001-1250 words	6	31.6%
	Greater than 1250 words	3	15.8%
<i>Detroit Free Press</i>	Less than 750 words	21	55.3%
	750-1000 words	6	15.8%
	1001-1250 words	5	13.2%
	Greater than 1250 words	6	15.8%
<i>Flint Journal</i>	Less than 750 words	157	76.2%
	750-1000 words	25	12.1%
	1001-1250 words	14	6.8%
	Greater than 1250 words	10	4.9%

RQ 1 relates to the measurement of source bias as shown through source selection of the identified source types whose quotes appeared in an article.

RQ 1: How did the *New York Times*, *Detroit Free Press* and *Flint Journal* coverage of the Flint Water Crisis between January 1, 2015 and January 23, 2016, relate to frequency of quote source

presence including, *denial officials*, *support officials*, *activists*, and *scientists*?

The researcher conducted a frequency analysis of the presence of each quote source in the newspapers to answer RQ 1. The total frequency of quote-presence and percentage of quote-presence in the census are reflected in Table 7.

**Table 7:**  
**Quoted Source-Type Frequency by Newspaper**

Newspaper/Quote Type		Presence Freq.	Presence Freq. %
<i>New York Times</i> <i>N = 19</i>	Denial official	13	68.4%
	Support official	10	52.6%
	Activist	6	31.6%
	Scientific support	0	0%
<i>Detroit Free Press</i> <i>N=38</i>	Denial official	29	76.3%
	Support official	19	50.0%
	Activist	27	71.1%
	Scientific support	4	10.5%
<i>Flint Journal</i> <i>N=206</i>	Denial official	108	52.4%
	Support official	71	34.5%
	Activist	53	25.7%
	Scientific support	30	14.6%

Analysis reflected that use of official sources occurred most frequently in the aggregated sample, confirming that official-source bias existed. The findings regarding the frequency of denial officials demonstrated significant inclusion in the *New York Times*, ( $f = 13$ , 68.4%)

*Detroit Free Press* (f=29, 76.3%) and *Flint Journal* (f=108, 52.4%). In comparison, all three newspapers showed slightly less inclusion of support officials: *New York Times* (f=10, 52.6%) *Detroit Free Press* (f=19, 50%) and *Flint Journal* (f=71, 34.5%).

Activists appeared in the *New York Times* (f=6, 31.6%), *Detroit Free Press* (f=27, 71.1%), and *Flint Journal* (f=53, 25.7%), reflecting that activist sources appeared in less than one-third of all articles for each newspaper.

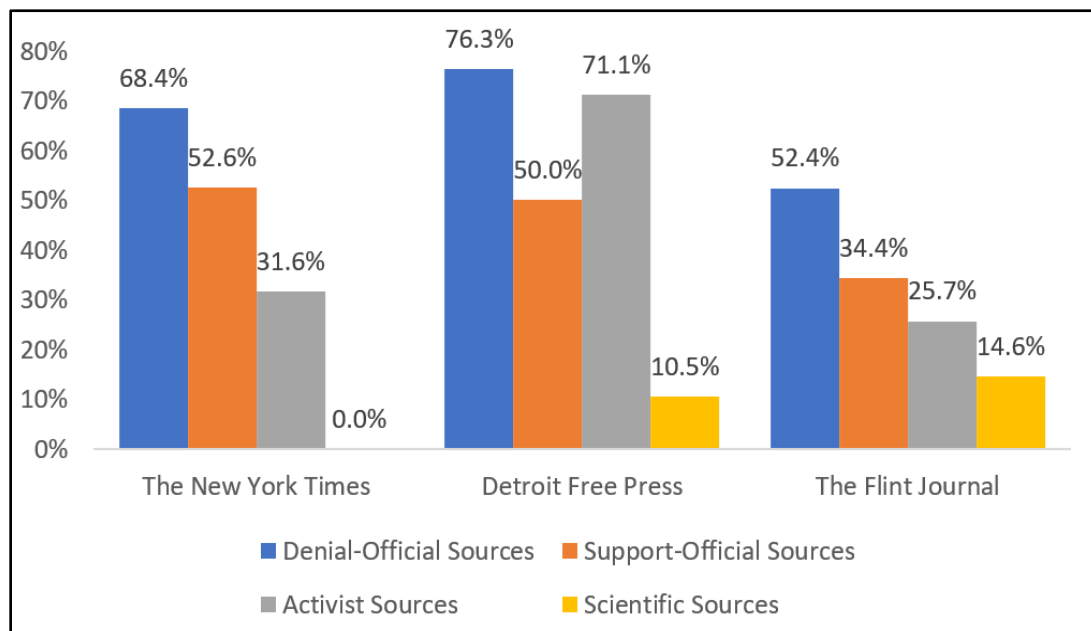
Quote-presence by scientific sources, including both science and health researchers, was least likely to occur: *New York Times* (f=0, 0%), *Detroit Free Press* (f=4, 10.5%), and *Flint Journal*, (f=30, 14.6%).

Total frequency among all newspapers by source type found 150 articles featured quote presence by a denial official. Support officials existed in 100 articles. Activists were present 86 times and scientists were present 34 times.

The analysis found significant differences among the frequency of sources as seen by percentage in Figure 3.

**Figure 3:**

**Quoted Source-Type Frequency by Newspaper**



The comparison of differences among source types found the *New York Times* featured the least significant differences among the three primary groups: Denial-official sources: 68.4%; support-official sources, 52.6%; and activist sources 31.6%, reflecting the most balance of the three newspapers; however it failed to include scientific sources. In addition, both denial and support officials appeared most frequently in the local and national newspapers; however, the *Detroit Free Press* used activists (f=71.1%) in articles more frequently than support officials (f=50%), representing more voice provided to the activists.

RQ 2 relates to environmental injustice as measured through descriptive terms and topics used in the coverage.

RQ 2: How did the *New York Times*, *Detroit Free Press* and *Flint Journal* coverage of the Flint Water Crisis between January 1, 2015 and January 23, 2016, relate to frequency of descriptive terms including *dismissal*, *disenfranchisement*, *crisis*, *activist group identified*, and the inclusion of a *mobilization/protest event*?

The research measured frequency of descriptive terms in each newspaper and the census to answer RQ 2 (Table 8).

**Table 8:**  
**Frequency of Descriptive Topics by Newspaper**

Newspaper		Total Present	% of Total Present
<i>New York Times</i> <i>N = 19</i>	Dismissal	1	5.3%
	Disenfranchisement	15	78.9%
	Crisis	15	78.9%
	Activist group identified	1	5.3%
	Mobilization/ Protest	1	5.3%

**Table 8 (cont'd)**

<i>Detroit Free Press</i> <i>N</i> = 38	Dismissal	11	28.9%
	Disenfranchisement	12	31.6%
	Crisis	15	39.5%
	Activist group identified	8	21.1%
	Mobilization/ Protest	8	21.1%
<i>The Flint Journal</i> <i>N</i> = 206	Dismissal	27	13.1%
	Disenfranchisement	16	7.8%
	Crisis	71	34.5%
	Activist group identified	39	18.9%
	Mobilization/ Protest	21	10.2%

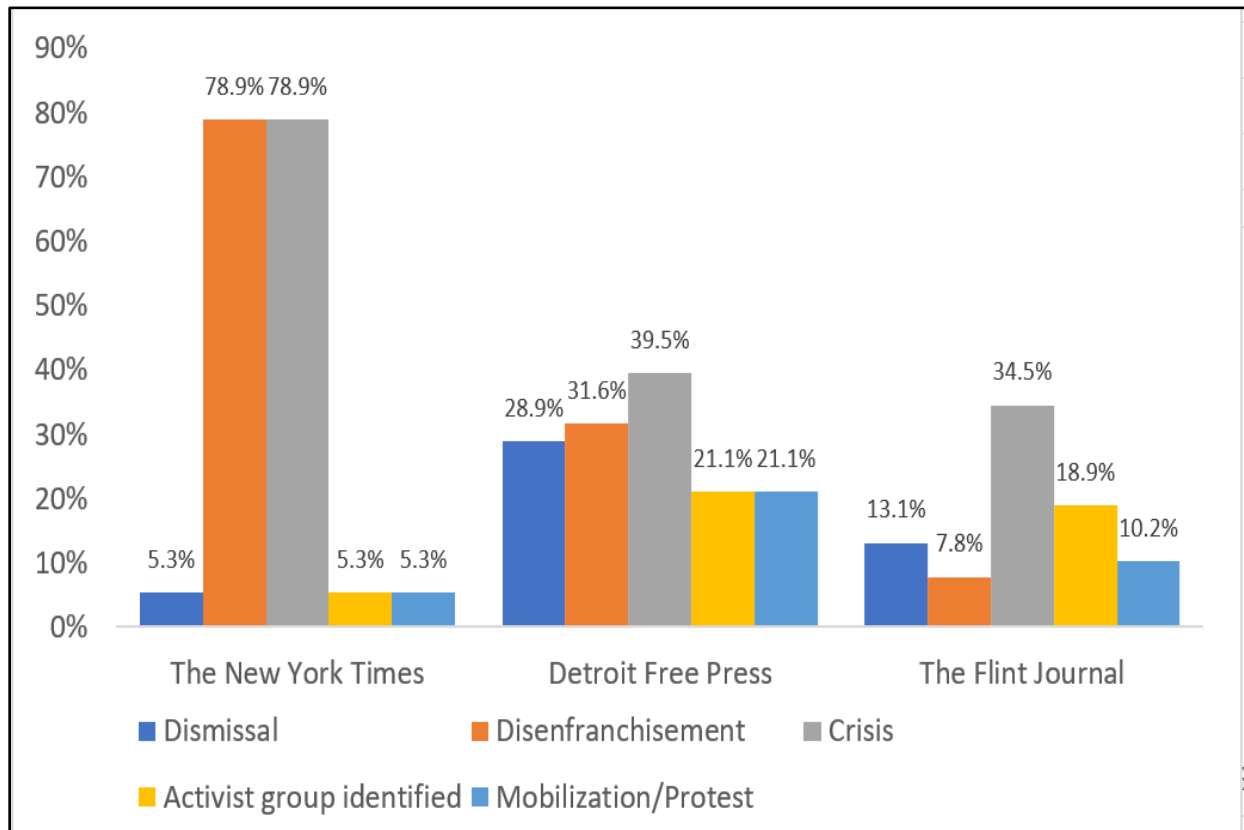
References to crisis appeared in all newspapers most frequently among the descriptive terms: *New York Times* (f=78.9%), *Detroit Free Press* (f=39.5%), and *Flint Journal*, (f=34.5%), reflecting that the issue was accepted in the context of seriousness reflecting a crisis state; however, it should be noted that this label occurred, with a single exception, after the government acknowledged the scientific findings were accurate. The topic of disenfranchisement was second most frequent in the national and state newspapers: *New York Times* (f=78.9%); *Detroit Free Press* (f = 31.6%). This reflects that both newspapers framed the issue as environmental injustice. In contrast, this topic appeared with the least frequency of all descriptive topics in the *Flint Journal*, (f = 7.8%), reflecting that the hometown paper placed little emphasis on how the crisis corresponded to the injustice placed on its already, disenfranchised city. It is of note that the *New York Times* sample size is very limited.

Acknowledgment of formal activist groups by name, such as the Democracy for Defense League, Pastors for Social Action, Clean Water Coalition, Water You Fighting for, the Michigan NAACP, and the People's Water Coalition, and inclusion of acts of mobilization or protest in the coverage were more prominent in the *Detroit Free Press* (Mobilization/protest identified,  $f=21.1\%$ ; Activist group identified,  $f=21.1\%$ ). Both occurred less frequently in the *New York Times* (Mobilization/protest identified,  $f=5.3\%$ ; Activist group identified,  $f=5.3\%$ ) and *Flint Journal* (Mobilization/protest identified,  $f=18.9\%$ ; Activist group identified,  $f=10.2\%$ ). This reflects that the national and local newspapers provided less legitimacy to the activist movement as an organized, collective effort.

The frequency analysis of all terms indicates the *Detroit Free Press* most often portrayed the incident as environmental injustice. The *Flint Journal* was less likely to portray the crisis in terms of environmental injustice overall. Results from the *New York Times* indicate the national newspaper primarily reflected the topic of environmental injustice through measures of disenfranchisement and the descriptive term *crisis*.

The differences are further displayed in Figure 4.

**Figure 4:**  
**Frequency of Descriptive Topics by Newspaper**



RQ 3 through RQ 5 relate to environmental injustice topics and the relationship to source types. The researcher employed a Kendall's tau\_b to determine potential correlations between the primary sources and the presence of dismissal, disenfranchisement, and crisis. A Kendall's tau\_b is used to establish relationships between rank-order variables. The researcher placed the variables in a rank order of absence = 0 and presence = 1. The analysis measured effects at the  $p < .05$  and  $p < .01$  levels. Table 9 reflects the relationships between variables.



**Table 9:****Correlation Analysis of Source-Type and Categorical Variables by Ordinal Classification**

			<b>Correlations</b>					
			Official-Denial	Official-Support	Activist	Disenfranchisement	Dismissal	Crisis
Kendall's tau_b	Official-Denial	Correlation Coefficient	1.000	.045	.192**	.134*	.297**	.013
		Sig. (2-tailed)	.	.471	.002	.029	.000	.834
		N	263	263	263	263	263	263
	Official-Support	Correlation Coefficient	.045	1.000	-.020	.155*	.019	.170**
		Sig. (2-tailed)	.471	.	.743	.012	.756	.006
		N	263	263	263	263	263	263
	Activist	Correlation Coefficient	.192**	-.020	1.000	.083	.136*	-.070
		Sig. (2-tailed)	.002	.743	.	.181	.028	.257
		N	263	263	263	263	263	263
	Disenfranchisement	Correlation Coefficient	.134*	.155*	.083	1.000	-.040	.171**
		Sig. (2-tailed)	.029	.012	.181	.	.519	.006
		N	263	263	263	263	263	263
	Dismissal	Correlation Coefficient	.297**	.019	.136*	-.040	1.000	-.156*
		Sig. (2-tailed)	.000	.756	.028	.519	.	.012
		N	263	263	263	263	263	263
	Crisis	Correlation Coefficient	.013	.170**	-.070	.171**	-.156*	1.000
		Sig. (2-tailed)	.834	.006	.257	.006	.012	.
		N	263	263	263	263	263	263

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

RQ 3: What is the relationship between the categorical variables of *denial officials* and the absence or presence of textual references to the individual variables of *dismissal*, *disenfranchisement*, and *crisis*?

The analysis found significant correlations between use of denial sources and references to disenfranchisement (Tb=.166; p=.512) and dismissal (Tb=.289; p=.000) Further analysis demonstrated denial sources were not significantly related to the label of crisis (Tb= .041; p=.512). These results suggest that inclusion of denial officials as quote sources related to the topics of disenfranchisement and dismissal in articles, yet textual references to crisis appear independent of whether denial officials were used.

In regard to RQ 4:

RQ 4: What is the relationship between the categorical variables of *support officials* and the

absence or presence of textual references to the individual variables of *dismissal*, *disenfranchisement*, and *crisis*?

The analysis found correlations between government support sources at the  $p > .05$  level for topics of disenfranchisement ( $T_b = .145$ ;  $p = .019$ ) and the label of crisis ( $T_b = .143$ ;  $p = .021$ ). In contrast, the results demonstrated no correlation between the use of government support sources and articles containing the topic of dismissal ( $T_b = .029$ ;  $p = .637$ ).

These findings suggest the inclusion of support officials increased the likelihood of the social injustice measures of disenfranchisement and crisis, but this had neither a positive nor negative relationship with dismissal appearing within an article.

In terms of RQ 5:

RQ 5: What is the relationship between *activists* and the absence or presence of textual references to the individual variables of *dismissal*, *disenfranchisement*, and *crisis*?

The results demonstrated significant correlations between activists, and the variables of denial officials ( $T_b = .192$ ) and dismissal ( $T_b = .136$ ). This indicates that when activists were mentioned, the article was also likely to include a denial official and elements of dismissal, yet references to crisis were not shown to be significant.

Beyond the relationship between sources and topics, the results also indicated correlations between the selected topic variables. Textual references to crisis were found to have a positive correlation at the  $p < .01$  level with disenfranchisement ( $T_b = .171$   $p = .006$ ) and a negative correlation at the  $p < .05$  level with dismissal ( $T_b = -.156$ ;  $p = .012$ ).

The following discussion further analyzes the findings in the frequency and correlational analyses, followed by a comprehensive discussion of the cumulative findings and their implications.

## 5. 2 Analysis of results

Portrayals of significance are developed through emphasis on a topic in terms of presence within the location of a newspaper and an article's length. The HCLDM predicted episodic stories with a lack of depth and attention; therefore, the research successfully confirmed that short stories in the inner sections of the newspaper would appear most frequently.

The findings regarding source-type frequency support traditional frames of official-source bias. This reflects official sources were afforded more opportunity to speak directly to the audience without paraphrasing. Both official source-types (denial and support) taken together across all newspapers represented bias (official sources:  $f=179$ ; activists:  $f=86$  science/health officials:  $f=34$ ). Official sources that represented denial demonstrated the most cumulative frequency: denial official source type ( $f=150$ ); support official source type, ( $f=100$ ); activist quote sources ( $f=86$ ); and scientific quote sources ( $f=34$ ).

In addition, official sources representing denial appeared in 68. 4% of *New York Times* articles, 76.3% of *Detroit Free Press* articles, and 52.4% of *Flint Journal* articles. In comparison, activist sources were less often quoted in the *New York Times* ( $f=31.6\%$ ); *Detroit Free Press* ( $f=71.1\%$ ), and *Flint Journal* ( $f=25.7\%$ ).

The analysis demonstrated that activists were less prevalent than governmental sources even when distinguishing the difference between denial and support officials who challenged the status quo: *New York Times* ( $f= 52.6$ ) and *Flint Journal* ( $f=34.5\%$ ). The *Detroit Free Press* demonstrated higher frequency of activists ( $f=71.1\%$ ) than governmental support officials ( $f=50\%$ ).

This demonstrates that the research successfully predicted that official sources would appear most frequently among the selected groups in terms of official source bias as an

aggregate, although support did not extend to official sources on the individual, newspaper level for the *Detroit Free Press*. Therefore, this prediction was not supported across all newspapers. Similarly, as the *Detroit Free Press* was more likely to reflect activist sources than to support official sources, this prediction was also not supported for that newspaper.

Various factors may explain the differences. First, some Detroit activist groups aligned with Flint's mobilization efforts under the umbrella that "water is a human right" because both city's water customers were paying well above the national average for water (*The State of Public Water*, 2016). Secondly, this is perhaps the result of regional news preferences insofar as the official support sources included members of the local city council and a congressional district that did not include Detroit. Also of note is that the *Detroit Free Press* contained the highest ratio of the selected source-type per article, perhaps reflecting a greater attempt at balance among sources.

The relationship between specific source-types and descriptive terms demonstrates significant findings. Denial officials presented a significant relationship to dismissal (the claims made against status quo were dismissed or the source was dismissed). This is perhaps not surprising as the task force investigating the crisis found "intransigent disregard of compelling evidence of water quality problems and associated health effects, callous and dismissive responses to citizens' expressed concerns," and "persistent delays in coordinating appropriate responses to the resultant public health crisis once irrefutable evidence of exposure and poisoning was present" (*Flint Water Advisory*, 2016, p. 6).

The positive correlation between denial officials and disfranchisement was surprising. This indicates that even when denial officials were present in an article, the portrayal of the community's disenfranchisement remained, demonstrating that newspapers did recognize the

problem within a frame of environmental injustice despite the inclusion of sources that also corresponded to dismissal.

Of note is that the *Flint Journal* presented the topic of dismissal with little frequency (f=13.1%), which would seem to indicate the legitimacy of the activists' claims was rarely contested. Although this cannot be explained in the scope of this research, it may be hypothesized that the concerns were dismissed through the refusal to respond to media inquiries. Qualitative review of the articles prior to the content analysis noted that officials were more likely to provide "no comment" in the *Flint Journal*, especially in the latent stage of the crisis where the review found accountability lacking. This may explain why frequency of denial officials in the *Flint Journal* (f = 52.4%), was less frequent in comparison to the *Detroit Free Press*, (f = 76.3%) and *New York Times*, (f = 68.4%). In other words, the demands of activists remained without an official response at the local level.

Another possible explanation is that the *Flint Journal* contained more stories about specific local concerns that did not involve official sources. For example, stories about water bottle drives, community meetings, and blood-lead testing events lacked the sources measured within the analysis.

In comparison, presence of support officials demonstrated a positive relationship with the topic of disenfranchisement and crisis. This indicates that articles featuring support officials are more likely to mention the lack of privilege in the community and identify the problem with the severity of a crisis state. Previous research on mobilization about environmental issues demonstrates success can be linked to frames of disenfranchisement (Hadden, 2015; Taylor, 2000). Interestingly, the research found less frequency of the disenfranchisement used as a topic in the local newspaper, the *Flint Journal* (f=7.8%), as compared to the *New York Times*

( $f=78.9\%$ ), and *Detroit Free Press*, ( $f=31.6\%$ ). The results could be explained because the community did not require the context of its own disenfranchised state. It may also be hypothesized that the *Flint Journal* preferred to refrain from negative portrayals of its own community.

The finding that support officials did not have a significant relationship with dismissal reflects that the power of their message was not significant enough to create a predictable frame. Whereas activists did present a positive relationship to dismissal, indicating that their inclusion did not successfully counter the position of denial officials. This may be better understood through qualitative analysis.

In terms of relationships between descriptive terms, perhaps not surprisingly, dismissal was found to have a negative correlation ( $b = -.156$ ) with the term “crisis.” This likely demonstrates the relationship between assigning a label to a problem and its recognition. The research also established a strong correlation between denial officials and dismissal ( $p=.289$ ).

The topic of disenfranchisement had a positive correlation with the crisis, which is also noteworthy ( $p=.171$ ). The analysis found presence of disenfranchisement was most often found in the *Detroit Free Press* and *New York Times*. It makes sense that disenfranchisement related to the word “crisis” given the tendency of these newspapers to include disenfranchisement as a topic and that articles increased within these newspapers after the problem gained national attention and a label.

Overall, the findings confirm that specific-source types, whether denial sources or those in favor of change, influenced frames of environmental injustice within the newspapers coinciding with their relative positions on the Flint Water Crisis. The findings validate the prediction that the presence of support officials and activist sources would have a positive

relationship with the topics of disenfranchisement and crisis. It also supported the prediction that denial officials would relate to dismissal. However, the prediction that denial sources would have a positive relationship with disenfranchisement was not anticipated. This finding warrants further study and may be better understood through qualitative analysis.

## CHAPTER 6: DISCUSSION AND CONCLUSION

Examining frames through quantitative analysis assists in better understanding an event and how it is developed within a broader context (Borah, 2011). This exploratory study of the Flint Water Crisis offers evidence to support the proposed model of HCLD disasters, which predicts a pattern of governmental dismissal, community activism, and episodic reporting, among other commonalities. The new model remains adaptable. Therefore, future frame analysis can facilitate a more precise model that clarifies the predictable pattern and media's response within these slow-onset, environmental disasters. The overarching goal within communications research in terms of slow-onset, environmental disasters should establish criteria that professional journalists can employ to act as watchdogs and intervene through active reporting during the latent stage.

This case study of Flint concludes with Flint's investigative task force and supports previous, qualitative analyses that indicate newspapers on the local, state, and national level bear some responsibility through reliance on official sources, as these sources were strongly correlated with dismissal (Chavez et al., in print; Gabaldón, 2016). In addition, this research establishes infrequency within local content in use of activists as quote sources (*New York Times*:  $f = 31.6$ ; *Detroit Free Press*:  $f = 71.1$ ; *Flint Journal*:  $f = 25.7$ ), identification of formal activist groups (*New York Times*:  $f = 5.3$ ; *Detroit Free Press*:  $f = 21.1$ ; *Flint Journal*:  $f = 18.9$ ), and inclusion of mobilization or protest events (*New York Times*:  $f = 5.3$ ; *Detroit Free Press*:  $f = 21.1$ ; *Flint Journal*:  $f = 10.2$ ). This finding reflects that environmental injustice occurred in both source selection and the presented legitimacy and significance of the latent crisis. In addition, the aggregated results demonstrate official sources – regardless of their message – appeared with much more frequency, which reflects that the voices of activists remained less legitimized than



officials.

These specific findings offer evidence that coverage of the Flint Water Crisis followed the HCLDM through its reliance on governmental sources that were more likely to dismiss residents' concerns, therefore maintaining the status quo. What remains unknown is why the presence of these sources also demonstrated a significant relationship to acknowledgement of disenfranchisement within the community. That relationship indicates stories included recognition that the city suffered disadvantage or injustice as a result of its disenfranchised state. This is a positive finding in terms of the normative function of social responsibility.

Journalistic standards strive for objectivity, but true objectivity remains a goal, not a reality (Callaghan & Schnell, 2005). Callaghan & Schnell (2005) argue the lack of true objectivity lies in internal bias, manipulative sources, limitations on news gathering, and our innate beliefs about a given topic. Some normative scholars suggest the media forgo attempts to remain entirely objective, but rather approach their sources and stories with a critical eye, make value judgements about information, and serve as an advocate for the people (Ettema & Glasser, 1998). In doing so, the watchdog function maintains that a journalist's role is to expose corruption and hold leaders accountable (Ettema & Glasser, 1998; Laswell, 1948; Nielsen, 2016).

If the journalistic paradigm calls for turning to authoritative news sources, then those believed to possess authority will have a better chance of getting a voice in the news. When high prestige official sources appear in the news, the reporter-source relationship tends to legitimize or even rectify the power structure of society (Wahl-Jorgensen & Hanitzsch, 2009, P. 109).

This research demonstrates the marginalization of activist groups and activist voices as seen in studies of protest and social injustice. McLeod (2007) suggests that journalists must follow normative principles to counter framing when covering protests. The normative theory

looks beyond the freedom of the media to report as it desires, but rather suggests the media should reflect a social responsibility (Christians, 2009; McLeod, 2007).

The normative tradition fails to reach consensus regarding the prescribed amount of responsibility the media has to the public (Christians, 2009). At a minimum, journalists, are called upon to “develop self-regulatory mechanisms of accountability based on voluntary promises in response to demands from the public or government” (p. 24). This accountability failed in the case of the Flint Water Crisis at both levels, but the findings that some messages of environmental injustice penetrated the source bias is promising.

Modern-day examples of normative theory appeared during the 2017 presidential campaign when some news organizations began emphasizing their fact-checking efforts to highlight falsehoods presented by candidates and governmental officials (Kessler, n.d.; Wallace and Kiely, n.d.). Such practices demonstrate the effort to investigate claims by governmental sources. The *New York Times* implemented a normative principle often described as “citizen” (Outing, 2005) or “public journalism” (Rosen, 1995, p. 24), when it launched a confidential tips page in December 2016 (*Got a Confidential*, 2016). Rosen (1996) says: “When properly approached, public journalism is about challenging people to interact with journalists and with each other as concerned residents rather than as victims, consumers, or bystanders” (p. 16). This approach may be even more essential as climate change poses an increasing threat and recent governmental policies and deregulation place budgets over environmental protections. It is important for journalists to recognize the communities that are most vulnerable and to become watchdogs for environmental injustice.

The need to evaluate official sources in two ways within frame research involving issues of environmental injustice is another significant finding. This includes those who deny the

problem and those who challenge status quo. The pattern of HCLD demonstrates the presence of both types of sources, and this research demonstrates a quantitative correlation between the two source types and topics in news coverage. Recognition of these sources as distinct will improve future frame analysis.

The timeline of the Flint Water Crisis demonstrates official governmental sources who challenged the status quo were unable to successfully intervene within the latent crisis at an earlier state. Identification of specific characteristics that make an official less likely to change the status quo is necessary in future research. For example, did partisan differences during the Flint Water Crisis make Democrats challenging the Republican-dominated state government more likely to be dismissed, or were minority officials in Flint more likely to face dismissal? Another question is whether political advocates represented showboating over direct activism? In other words, was the latent stage of the Flint Water Crisis a political issue that became tied up in partisan conflict?

Research must develop a more predictable model for HCLD through further in-depth analysis of sources and topics, which will identify ways for journalists to challenge media norms and circumvent disaster. Failures can be corrected through incorporation of a preventative public-health approach to environmental injustice. This requires the media to understand the HCLDM and predictors, so that a proactive approach is possible.

The Flint Water Crisis is a unique example of how the dismissal of concerns by the disenfranchised residents of Flint were ignored despite obvious evidence. The water flowing from the taps of hundreds of homes was tainted with particles caused by pipe erosion that made its appearance and smell so foul and discolored that, arguably, no American would choose to swim in such water, let alone drink or bathe in it. The Flint Water Crisis represents an

environmental injustice so clouded with dismissal, deception, and lack of transparency that it illustrates the extent of damage that can occur when a government intentionally neglects a community so disenfranchised that it lacks voice. The residents of Flint were poisoned by power and injustice.

The right of the media to report corruption, question authority, and hold the government accountable is protected by the First Amendment. The Flint Water Crisis represents a failed opportunity to effectuate this freedom of the press. The people of Flint were essentially abandoned by the media watchdog despite its elevated right as a protected institution. Residents read repeated assurances that their water was safe, but they knew better. At a time when media trust is declining, the media must elevate itself as an institution to serve its dependent audience. Recent research finds public trust in the media has reached an all-time low. A 2016 Pew Research Poll found 22% Americans trusted local news and 18% trusted news from national networks (Mitchell et al. 2016). The media must do better.

News organizations shrunk their workforces significantly over the past twenty years, leaving journalists with heavy workloads, which may hinder in-depth reporting and lead to a preference for official sources that are quick-and-easy and skilled at delivering succinct and polished information and soundbites (Barthel, 2016; Clark, 2013; Houston, 2010; Wasserman, 2008).

Still, newsrooms are obligated to pursue answers beyond the official soundbite. Lasswell (1948) describes the media's role as one of observation, surveillance, collecting evidence, and reporting relevant facts. Although he made this observation 70 years ago, it still holds true today.

Christians (2009) describes this obligation as such:

Theories of democracy have an empirical and normative dimension so, too, the media's various roles have both elements. The role of the media, or of journalists working within the media, has a component that describes journalistic tasks or practices and another dimension that refers to their larger purposes and obligations" (p. 29).

Among his suggestions are to include key issues such as: identification of activists, targets, and the goals of each; accepting protesters as legitimate sources; including the response of the target; omitting the reactions of those not involved; and committing to more in-depth reporting (Christians, 2009). In this way, normative techniques are "instruments of emancipation of the status quo" (Christians p. xi).

Academic institutions must teach journalism through an emphasis of its normative responsibility within frames of injustice to achieve success in watchdog reporting and its own accountability to consumers. This includes education that models a public-health response with emphasis of prevention and intervention, versus episodic reporting of events. Such education would also include: 1) the most effective ways to identify risks in communities; 2) identification of communities most at risk; 3) creating compelling coverage that includes thematic information; and 4) how to incorporate prevention into daily news.

Journalists can also employ a "toolbox" using readily available investigative methods, which are made even easier through online information. Such online resources afford journalists the tools to achieve more with less. These can prevent a lack of governmental transparency through limiting the reliance on official sources.

Media resources include:

- Legal and newspaper databases, public meeting minutes, online research journals, and archival information.
- Social media: Monitor community groups and individual interactions with the government. Groups and individuals are often accessible by Facebook and Twitter.

- Locate contact information through business and community websites.
- Conduct searches through newsroom databases to ensure that episodic stories receive follow-up and updated developments that hold officials accountable to timelines.

In addition, journalists should consider mobilization, citizen complaints, lawsuits, and illness as clues of larger problems. They must place emphasis on active reporting such as use of FOIA, independent analysis, and other research resources. Establishment of relationships with outside experts such as scientists, public health officials, and attorneys can also offer alternative sources to provide empirical evidence to legitimize a latent problem or suspected environmental injustice.

There are several limitations to this research. First, it is limited to a single time frame. Future research might consider the longitudinal impact of the Flint Water Crisis. This could be achieved through additional content analysis, focus groups, or surveys of residents and members of the media including editors, reporters, and other decision makers. A critical question is whether the dangers were overlooked, dismissed, or acknowledged, but ignored within newsrooms. This analysis may be made easier when concerns of litigation become less of a hindrance to participation.

In addition, portrayals of budget or revenue-centric policies were coded, but excluded in an attempt to narrow the scope of the research. Future research should evaluate these findings in relation to other HCLD events. Further research might also include frequency analysis of source types by date, over the span of the crisis. These findings may contribute to mobilization research if a correlation between greater media inclusion of specific sources correlates to more rapid success with latent-disaster intervention and recognition.

This research finds the topic of disenfranchisement is shown to increase the visibility of

an injustice; therefore, it is of note that the *Flint Journal* rarely portrayed its own community as disenfranchised. In light of community-focused journalism, it is important to better understand whether local newspapers are consistently unlikely to acknowledge injustice within their own communities in terms of environmental concerns and beyond.

This research examined only the absence or presence of sources as measured by quotes; therefore another limitation is that it did not evaluate tone or frequency of quotes or quoted officials. This limitation was the result of failed efforts of coder reliability. Coders were unable to achieve agreement regarding the tone or context of quotes, or the overarching themes within articles. Such analysis could better answer questions about journalistic balance. Future study should also include columns, editorials, and images to further analyze HCLD content as a package.

The Flint Water Crisis represents institutional failures on the part of both the government and the media (Chavez et al., in print; Gabaldón et al., 2016). It indicates how the media's reliance on official sources and failure to function as a watchdog, extended the length of residents' exposure to dangerous water. It is a tragic example of the devastation that results from ignoring the disenfranchised and presenting news through the voice of the official.

So far, everything has been flowing smoothly, according to a city spokesman. "Everything is going fine on the system," said city Spokesman Jason Lorenz. "The water is of great quality" ... I'm a resident – I can personally say the water quality didn't change at all," (Adams, 2014). Published by *MLive/ The Flint Journal*, April 28, 2014.

## **APPENDIX**



## **HCLD EVENTS**

Incident, location, and date of disaster recognition/response within review of HCLD events:

Advanced Disposal Landfill, Tallassee, Alabama – 2017

Bovine Spongiform Encephalopathy Crisis: Great Britain – 1996

Bullseye Glass Toxic Emissions: Portland, Oregon – 2017

Pesticide Poisoning Deaths: California's Central Valley – 2017

Cancer Alley Deaths: Between Baton Rouge and New Orleans – 2000

Climate Change Effects: Barrow, Alaska (Wildfires) – 2015; Newtok, Alaska – 2003.

Flint Water Crisis: Flint, Michigan – 2016

Georgia Power Coal Ash Ponds Contamination: Southeastern United States – 2016

King Gold Mine Spill: Silverton, Colorado – 2016

Libby Asbestos Deaths: Libby, Montana – 2000

Oroville Dam Spill, Oroville California – 2017

Washington, D.C. Water Crisis: Washington, D.C. – 2008

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