MULTIMODAL FRAMING: HOW MULTIMODAL ELEMENTS INFLUENCE FRAMING EFFECTS IN THE DEBATES OF PLASTIC POLLUTION IN THE BOTTLED WATER INDUSTRY

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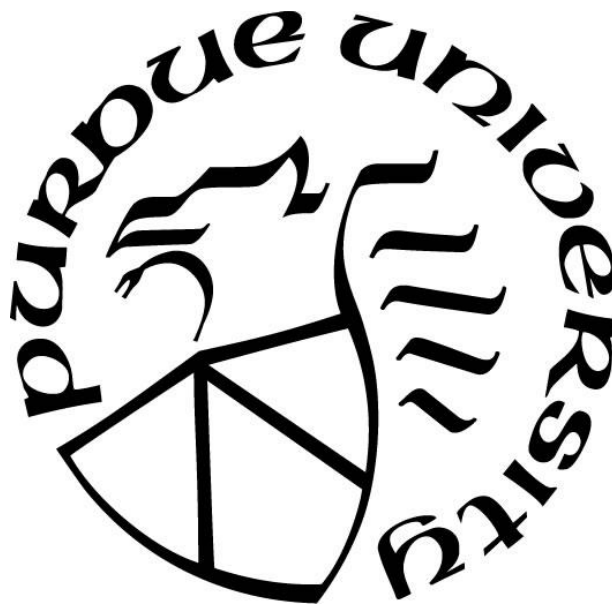
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Dedicated to my wife Peihan for being such a strong and supportive partner during this journey.

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ABSTRACT

Environmental issues have been described as one of society's wicked problems. In contrast to widespread technological responses to environmental issues, I spotlight social aspects as chief barriers to productive change. I posit that socially constructed frames can influence people's perspectives, opinions, and behaviors regarding environmental issues. In this project, I explored organizational work and framing processes as a means to bridge the chasm between technological and social approaches to environmental issues. To date, researchers using framing theory have narrowed their focus to testing the effectiveness of different frames. By doing so, however, researchers remain limited to discursive explanations regarding how frames are constructed at a micro level. In contrast, I adopted a multimodal approach that accounts for both discursive and non-discursive modalities to investigate how organizations deploy visual, material, and textual approaches to shape environmental meaning through framing processes. Specifically, I focused on organizational campaigns to construct meaning around the contentious issue of bottled water. I adopted a qualitative approach, using a multimodal analysis, to explore advertisements and campaigns used by bottled water companies and environmental activist groups to shape perspectives, opinions and behaviors of plastic containers and bottled water usage. I found that visual, material, and textual modalities can be used as value-neutral tools to help stakeholders construct different frames and shape the public's opinion of bottled water. Different multimodal elements serve different functions in constructing different frames. I also identified particular barriers for the framing construction process.

Keywords: Framing theory, multimodality, organizational work, environmental issues, bottled water.

INTRODUCTION

The Issues of Environmental Challenge and Public Awareness

The roadsides, once so attractive, were now lined with browned and withered vegetation as though swept by fire. These, too, were silent, deserted by all living things. Even the streams were now lifeless. Anglers no longer visited them, for all the fish had died (Carson, 1964, p. 3).

The opening quote demonstrates how Rachel Carson, an environmentalist, used her book Silent Spring (1964) to fight against the spreading use of the pesticide DDT. The power of discourse was displayed in the book as Carson constructed a doomsday scenario, helped to stop the use of DDT on a global scale. By framing how harmful it would become to the ecosystem if people continued to use DDT, Carson created a sense of urgency to stop its use. Maguire and Hardy (2009) argued that "the use of DDT was challenged, not by existing field members, but by stakeholders who were not part of the field, such as Rachel Carson, who's influential 1964 book, *Silent Spring*, was highly critical of DDT use" (p. 148). Since the mid twentieth century, more scholars and environmental activists have realized that to construct frames and stories can create a sense of urgency to change the way people look at their natural resources and to protect our planet (Carson, 1964; Leopold, 1977). Carson's work inspired me to see that the strategical construction of narratives may have the power to shape organizational practices, government decision-making, and citizens' ideology on environmentally related issues.

Carson's work also inspired me to question why some environmental protection works are successful, whereas others do not achieve similar outcomes. What can one learn from Carson's success and apply it to address today's issues, such as climate change, ocean plastic pollution, and biodiversity loss. On the 2018 World Environmental Day, the United Nation Environment Programme (UNEP) launched an environmental campaign that stated,

"If current trends continue, our oceans could contain more plastic than fish by 2050" ("Our planet is," 2018, para. 31). When UNEP targeted the plastic pollution today, it is still facing the same challenge Carson faced: lack of support and motivation to act on the environmental issues. In this paper, I provided with an alternative, socially constructed argument that looks at how issues are framed and influence people's opinion on environmental issues. I argue that the mass public's unawareness about environmental problems is one of the barriers that delaying us from remedying environmental challenges. How can frames be deployed as a tool to increase the mass public's awareness of plastic pollution issues? How can multimodal frames be used to increase public support and motivate governments to limit the use of plastic in packaging? In the interest of answering these questions, in this study I investigated how frames work to shape people's perspectives and organizational practices in regard to environmental issues. Specifically, I explored how different modes such as visuals and other multimodal texts were used in the collective framing process of the bottled water industry and the plastic pollution the industry produces. This selection of the empirical case of the bottled water industry encompassed with various kinds of negotiations, stakeholders, and campaigns to provide data for analysis.

Unsuccessful Communication in Environmental Crisis

Recently, non-government organizations, environmental activists, and even unaffiliated entities and individuals that care about the environmental issues are campaigning and acting to protect our collective environment and planet. From campaigning against sand oil drilling to mega conferences targeting the reduction of greenhouse gas emissions and to urging the decreased use of plastics to save the oceans, the importance and significance of preserving our natural environment and planet has never been so urgent. Regardless, a significant portion of mass public still fail to accept the evidence of the environmental crisis

or acknowledge the real threat it brings (Wapner, 2002). Scholars have found that various efforts to protect the environment have not led the mass public to have a better understanding of the environmental issues (Clapp & Dauvergne, 2011). For example, a 2014 Gallup survey found that among various issues such as the economy, immigration, unemployment, and drug use, participants had the least concern about climate change issues ("Climate change not," 2014). This indicates that although stakeholders have been working on relaying to the mass public the urgency of climate change issues, a significant portion of the population still are not paying enough attention to them. Scholars have argued that lack of recognition of environmental challenges could become a critical threat to our collective future (Clapp & Dauvergne, 2011; Wright, et al., 2013). Without concrete recognition of the environmental challenges they face, people are less likely to act collectively to remedy environmental problems. Since ineffective communication regarding environmental issues might led to an underestimation of the environmental challenge humans are facing. In this study I analyzed environmental communications from a multimodal elements level to see if alternative ways to frame issues are possible. Miller (2000) argued that environmental issues are not solely a reflection of nature; environmental issues are usually intentionally crafted by stakeholders. How society constructs message and creates meaning about environmental issues influences public opinion and collective action about these issues. Based on the social constructivism perspective, the framing process is essentially a meaning-construction process, where stakeholders actively construct meanings and deliver messages to the mass public to shape their ideology and social behaviors (Scheufele, 1999). Environmental activists need to construct a strong framework and gain enough support for motivating the public and political figures to act on environmental issues. The study of how stakeholders construct their message and understanding how micro level communication mechanisms work to shape the

communication process can help construct a more efficient message about environmental issues. This would also help to uncover how to increase stakeholders' will to act.

Improving Framing Effects as a Potential Solution

When searching for answers about more effective communication strategies, many scholars have focused on framing theory, which generally falls into the category of cognitive research (Scheufele, 1999). The concept of framing has been studied by scholars in social science fields such as communication, sociology, economies, and political science (Borah, 2011). Framing theory helps us understand how the public processes, interprets, and makes decisions on certain social issues (Gitlin, 1980). Gross and D'Ambrosio (2004) pointed out that framing theory provides a theoretical lens to help us understand how social values are formed, how values and norms are selected, and transformed into policymaking processes and organizational practices. Additionally, scholars have demonstrated that framing can play a crucial role in negotiations of social meanings and construction of collective social behaviors (Chong & Druckman, 2007; Miller, 2000; Mintz & Redd, 2003). Scheufele (1999) argued that framing theory helps set salient agendas on various social issues; thus, the framing process creates an opportunity for meaning creation on certain social issues (Fiss & Hirsch, 2005).

Scholars studying framing effects usually use sensemaking theory to explain how construction of different frames can shape people's ideas. For instance, Fiss and Hirsch (2005) noted that "sensemaking and framing are conceptually compatible" (p. 31), where sensemaking theory can serve as support for framing theory. Maitlis (2005) stated that sensemaking is essentially a social construction process in which stakeholders draw available cues from their surrounding environment to make decisions. Sensemaking represents the idea that "people develop some sort of sense regarding what they are up against, what their own

position is relative to what they sense, and what they need to do" (Weick, 1999, p. 42).

Further, researchers have also identified how humans use a constructed future as a "sense-making device" to guide and shape their behavior in the present (Lê, 2013, p. 725).

Sensemaking theory provides framing theory the theoretical foundation to explain the psychological aspect of how people construct and interpret meanings.

Scholars like Essén and Värlander (2018) have said that the concept of framing captures and highlights the dynamic of meaning building and construction processes in which framing provides cues, stories, and information for people in their sensemaking process. In addition, according to Kolko (2010), sensemaking is essentially a process which highly depends on making meaning from "unique perspectives and frames" (p. 5). Thus, using framing theory to explain sensemaking and meaning construction is possible. Discourse is also an important tool that people use to construct narratives in the framing process. The literature on discourse can help people better understand framing and sensemaking processes. For instance, according to organizational discourse theory, "texts are integral to the creation of meaning . . . meaning is created from collections of texts-or discourse" (Maguire & Hardy, 2009, p. 149). Alvesson et al. (2011) argued that "discourse constitutes and/or constructs whatever phenomenon we are interested in" (p. 1122). Further, they stated that many scholars prefer to analyze discourse because it can explain organizations better (Alvesson et al., 2011). According to Jian et al. (2008), instead of passively reflecting reality, discourse serves a more active role to construct and constitute reality.

By adopting framing theories from other social science disciplines, such as political science and communication, I contend that the collective framing process is one of the primary forces for influencing sensemaking, decision-making, and social practice. One of the most important steps to transform a vision of our future environment into reality and shape public opinion is the framing process, however framing effects cannot be applied the same to

all issues in behavior and decision making (Miller, 2000). People often use different types of discourse to construct various frames and this provided many alternative interpretive possibilities. According to Collins and Pinch (1982), people usually have multiple ways to interpret even the same environmental issue. The use of different types of discourse in the framing process may shift framing effects about certain issues (Chong & Druckman, 2007; Miller, 2000). Like Druckman (2001) argued, there are various modes that are used in the framing process such as "words, images, phrases, and presentation styles" (p. 227). Thus, an increased understanding of how people use different types of discourse to construct meaning and transform it into reality is necessary (Lê, 2013; Maniates, 2001). Better understanding of different mechanisms in the framing process would help create a more effective communication strategy and motivate people to act on the protection of the environment.

Multimodal Elements as Mechanisms Influencing the Framing Process

Recently, based on the need for a deeper understanding of how different modes of communication mechanisms work, a considerable body of literature on organizational study has shifted its focus from traditional text-related discourse analysis to multimodal discourse analysis (Buell, 2005; Lefsrud et al., 2017). For instance, Boxenbaum et al. (2018) suggested that there has been a shift to focusing on a visual and material turn in organizational study, which has led to promising research focusing on multimodal elements. Conceptually, this recent trend of multimodality study provides a starting point for my research. Scholars have argued that although they know a great deal about how text-related discourse shapes and influences the meaning construction process, they have usually overlooked the importance of other elements, such as visuals, materials, and videos (Höllerer et al., 2018). For example, Höllerer et al. (2018) wrote that solely relying on verbal and textual elements is not enough for understanding the sensemaking process; rather, multimodal research that combines

verbal, visual, and material elements is needed. Bell (2012) shared that multimodal elements such as visual elements in organizational studies have become increasingly important, not only in traditional areas such as the "overt or covert reflection of structure or behavior in organization" (p. 840) but also as a new way to look at constructing language or "ontological and epistemological language and methodological guidelines" (p. 840).

To generate a better understanding of how multimodal elements works on a micro level, many scholars have been calling for analysis beyond the traditional textual analysis of narratives, namely an analysis of multimodal elements (Bell, 2012; Höllerer et al., 2018; Jancsary et al., 2016 Lefsrud et al., 2017). Kress (2010) argued that multimodal analysis provides a new perspective to analyze traditionally overlooked information such as "image, writing, layout, music, gesture, speech, moving image, soundtrack, and 3D objects" (p. 79–80). According to Boxenbaum et al. (2018), "we do not know enough about how novel ideas, and responses to them, are affected by our use of images and artifacts and not only of verbal text" (p. 598). This indicates that a deeper understanding of multimodal elements such as images and artifacts will allow scholars to analyze issues from a more comprehensive perspective. Similarly, the previous studies on environmental framing effects have also heavily relied on the analysis of textual elements and need a more comprehensive multimodal analysis as extension (Singh & Swanson, 2017; Check, 2003; Myers et al., 2012; Schuldt et al., 2011). Thus, adoption of multimodal analysis in the study of framing effects is beneficial for the development of both multimodality research and framing study.

In this study, I argue that the key to increasing public awareness and support on various environmental actions is through collective storytelling and a powerful framing process. Under this notion, I argue that from a social constructivist perspective, notions and behaviors in regard to environmental issues can be constructed and influenced, especially by the different kinds of multimodal elements created by people through the framing process.

Further, I argue that multimodal elements when treated as a toolkit, can influence public sensemaking through the framing process and shape public opinion, policy development, and the organizational practice. Lastly, multimodal elements are a crucial tool for organizations to legitimize their behavior with the legitimacy process serving as the foundation for the survival and development of the organizations (Bitektine, 2011; De Vaujany & Vaast, 2016; Wasserman & Frenkel, 2011).

Research Questions and Expected Contributions

In this research, I explored how stakeholders use multimodal elements to shape environmental meanings and organizational practices in their campaigns through the framing process. In this study, I developed research questions such as:

- How might stakeholders use multimodal elements to contribute to the framing process of environmental issues?

- How do stakeholders use different multimodal elements (e.g., verbal, visual, and material elements) to influence collective storytelling and public sensemaking on environment issues?

- How do organizations use multimodal elements to construct frames to legitimate their products or purpose?

As one way to study the proposed research questions, I explored how stakeholders use diverse forms of multimodal elements to cultivate change in their campaign process in the bottled water industry. Specifically, by paying attention to three key areas (the visual, material, and textual elements), I explored in the framing process how stakeholders use different modes of multimodal elements to construct meanings of the bottled water industry as well as the legitimacy of the materials used in the industry. Understanding the dynamics in

the framing process also enabled a deeper understanding of the policymaking, decision-making, and collective action processes in the environmental issues.

Empirically, the selection of the bottled water industry case provided this study with a plethora of claims, campaigns, stakeholders, and negotiations. For example, there are many different stakeholders in the bottled water industry, including the manufactures who use plastic to make bottles, the manufacturers that use alternative materials such as paper to make bottles, the anti-plastic environmental activists, the NGOs, international organizations, and governments. Each of these provided different perspectives and claims in the plastic pollution debates, and each claim created different frames for a different story. For instance, based on the initial collection of the data, there are traditional environmental activists who frame the use of plastic bottles as harmful to the environment. There were also activists who realize the nature of framing and claim that bottled water manufacturers are intentionally creating frames to legitimize their products; thus, the activists create a series of crafted counter frames to make the plastic bottled water products unacceptable. Analyzing the use of multimodal elements in bottled water industry campaigns expanded and increased understanding of how multimodal elements influence the framing and sensemaking processes.

The expected contribution of this research was to connect framing theory with multimodality study. In addition, in this study, I intended to uncover how multimodal elements influence the framing process. Further, by conducting a study on the bottled water industry, this study addressed how stakeholders use multimodal elements as tools to shape organizational practice through the framing process and contributes to the development of a more comprehensive method to study multimodality in organizational studies. Finally, by analyzing how multimodal elements influence framing processes, I intended to provide practical contributions to decision makers and agenda setters on environmental issues. The

findings of this research extended to a broader theme and contribute to a more efficient communication strategy for environmentally related issues.

Structure of the Study

In the following paragraphs, I reviewed the background literature on framing theory, previous studies on multimodal elements, and the primary methods used to study framing and multimodal elements. After the literature review, I discussed the data-collection method. The third part of this study is the discussion of the research method, analysis techniques, and experimental research design. The fourth part is followed by the finding section. The fifth part is the discussion and conclusion chapter.

LITERATURE REVIEW

Framing Theory

Based on the social constructivism perspective, framing theory posits that stakeholders, mostly in the mass media, actively set different frames to construct different social realities or provide different information for the public to interpret and discuss important social events (Scheufele, 1999). According to Chong and Druckman (2007), the primary contribution of framing theory is providing a worldview through which issues can be perceived and interpreted in different ways when different frames construct these possibilities. For example, average citizens tend to understand social events or policy issues based on the information presented by various media sources, and how these sources frame the event or policy issue heavily influences the public opinion formation process (Gross & D'Ambrosio, 2004). Accessibility of information theory provides an idea that people can only process certain amounts of information at a time (Fiske & Taylor, 1991). Building on the accessibility of information perspective, Mintz and Redd (2003) found, for example, framing theory proposes the idea that individuals can be influenced and even manipulated by stakeholders based on their choice of what information to present. Further, they argued that framing is usually strategic; by presenting customized information and deliberately selected rhetoric, framing creates a desired opinion response from its target audience. A key idea of framing theory is that there are many alternatives based on a variety of ways to describe and present the information regarding the target issue or stakeholder (e.g., prospect theory).

Some scholars have argued that framing is a selected tactic intended to create attention and alter individuals' consideration of a certain issue. Druckman and Nelson (2003) wrote that the initial frame usually comes from political and social elites. In environmentally related areas, we usually see a pattern whereby governments, NGOs, and other organizations

create certain environmental events and agenda-setting campaigns for a particular environmental issue. Framing helps in policy campaigns and agenda-setting processes, but they are not one-way such that elites choose to deliver certain information to their audiences; rather, framing effects occur when citizens choose credible opinion leaders to help them sort through the sensemaking process (Druckman, 2001).

Miller (2000) provided a simplified model of framing. Collective storytelling leads to the emergence of different types of frames, which are then tested and selected by society. One or several frames become dominant and guide social practice and policymaking. In the last step, the dominant frame is widely accepted and becomes the rule, norm, or even law. To put it simply, the framing process can be treated as a simplified social sensemaking process in which multimodal elements can be used as a tool to increase the effect of framing. We also need to keep in mind that when an individual is exposed to both sides of controversial framing, the framing effects are usually diminished, and the individual will "return to their original (unframed) opinions" (Druckman & Nelson, 2003, p. 731). This may partly explain why, despite so many entities' urging environmental protection, there are still many others who do not take action. When there is a frame to argue for the urgency of protecting the environment, there is always a counterargument to weaken the framing effect. For example, when a global warming frame emerges, the counter-frame of an extremely cold winter in certain areas also appears. The counterargument weakens the global warming frame and diminishes people's motivation to enact environmental protection policies.

The framing effect is usually used to measure the effectiveness of a framing process; only strong frames can successfully influence public sensemaking and opinion. According to Chong and Druckman (2007), strong frames arise out of open discourse as the best methods of reasoning for debating positions on the issue. The strong frame usually influences opinion leaders and attracts audiences because it is more convincing than the alternative frames.

Further, environmental activists realize they have more ability to cultivate support when their campaigns are associated with positive ideas. For example, the frame of buying private land to improve the quality of drinking water will lead to more support about land purchase claims. Thus, a popular strategy to make a frame strong is to associate a proposition with a positive thought or idea that is generally accessible to the population.

Empirically, in the environmental area, many scholars have adopted framing theory to study communication aspects of the environmental issues. Schuldt et al. (2011) addressed the different frames of global warming and climate change. Under the global warming frame, the primary attention is on the rise in temperatures, whereas under the climate change frame, the focus is on unusual climate conditions. Because the audience can easily find counterevidence for the global warming frame (e.g., a cold winter in certain areas), Schuldt et al. (2011) argued that how an unusual climate condition is framed is crucial to public support for policy engagement. Scholars have also found that different frames do not have a homogenous impact on public opinion toward environmental issues (Myers et al., 2012; Petrovic et al., 2014). For example, Petrovic et al. (2014) claimed that framing climate change to its emission and fossil fuel consumption would not increase public support for mitigating climate change issues, whereas linking emission issues to pollution and the public health threat would increase engagement and support for climate change mitigation. Severson and Coleman (2015) went beyond the public health narrative and explored three dominant frames: "empirical-scientific frames," "deontological-moral frames," and "economic frames" (p. 1280). They found that all three frames could influence public support for the mitigation of climate change, but only the "positive science frame and economic equity frames appear to reduce the ideological divide in climate policy support between liberals and conservatives" (p. 1287).

These studies have demonstrated the importance of framing in influencing public opinion and organizational practice. However, most of the authors only focused on the contents of framing. The study of framing effects "mainly focused on the difference of framing effects in single frame conditions" (Borah, 2011, p. 251). The research design also relied heavily on text-related treatments to create different narratives and frames. Most of the authors ignored to study the effects of other mechanisms such as visual and material elements in the construction of a frame. (Check, 2003; Myers et al., 2012; Schuldt et al., 2011; Singh & Swanson, 2017). A recent wave of studies has suggested that multimodal elements such as visual and material elements can increase the engagement of targeted audience group and help to increase the efficiency of the communication (Christiansen et al., 2018; Croidieu et al., 2017; Höllerer et al., 2013; Höllerer et al., 2018; Puyou et al., 2018). Among all surveyed studies, only few have focused on how visual or material elements can influence framing effects (Christiansen et al., 2018; Essén & Värlander, 2018). Christiansen et al. (2018) explored how visual elements affect framing effects in organizational studies and argued that the use of visual elements can help organizations establish their identity as experts within a certain field. Essén and Värlander (2018) explored how materiality influences framing effects, suggesting that material elements can constitute an important part to shaping framing effects. Feldman and Hart (2018) pointed out that the effects of textual and visual elements in the framing process are not isolated, and the interaction between the two needs attention.

For the purpose of this paper, I primarily focused on the collective storytelling process, particularly how different stakeholders use different multimodal elements to help frame their opinion and how multimodal elements help one particular frame become dominant and widely accepted through the lens of meaning construction and the legitimacy process. I further explored how multimodal elements are being studied in the following chapter.

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Multimodality Study

As argued in the previous section, studying multimodal elements can increase understanding of the sensemaking and framing process. However, as Höllerer et al. (2018) wrote, "multimodality is notoriously difficult to pin down and to define precisely" (p. 8). Though there is no single definition for *multimodality*, many scholars in this area concur that multimodality is a combination of various kinds of social semiotics, each of which provides a unique way of delivering and constructing social meanings. Beyond the definition above, scholars have provided their own definitions as to what constitutes multimodal elements. Christiansen et al. (2018), for example, stated that multimodal contexts usually contain two separate parts, one of which is visual and the other verbal. According to Christiansen et al. the advertisements can be treated as a multimodal text because they contain visual elements, verbal elements, and graphic elements (p. 672). Zilber (2006) asserted that multimodality includes a linguistic and a nonlinguistic part where the nonlinguistic part includes "practices, the material, visual, emotional and spatial" elements (p. 64). Similarly, Boxenbaum et al. (2018) also contended that ideas are not only constructed through words, visuals, and material elements but also help to trigger and bolster responses to organizations. Scholars like Oliveira et al. (2018) viewed multimodal elements as material elements that can be treated as "mimetic." They argued that compared with concrete analysis, mimesis relies on "associations and meanings"; as opposed to the semiotic nature of material elements, the direct position or arrangement of the artifact leads to the sensemaking process (p. 34). Jancsary et al. (2016) defined *multimodality* from an institutionalist perspective and stated that "multimodality is governed by cultural and institutional rules, norms, conventions, and guidelines that tell us what is adequate, and what is not" (p. 181). In the meantime, multimodality has the power to influence rules, norms, conventions, and guidelines.

Based on my survey of multimodality research, the analysis of multimodal elements has been conducted with a broad scale of disciplines. For instance, multimodal analysis has been used in many areas of study such as architecture (Jones & Svejenova, 2018; Ravelli & McMurtrie, 2016), communication (Andersen & Boeriis, 2012), and economics (Höllerer et al., 2018). However, limited scholars have connected multimodal analysis with environmental issues. Some scholars have explored the use of different types of rhetoric and explained how stakeholders shape meanings and imaginings of the future environment (DeLuca, 1999; Lefsrud et al., 2017). Beyond the board scope of discipline, scholars have also explored multimodal elements within many topics in their studies. For example, some scholars have focused on how multimodal elements can contribute to the construction of organizational identity (Bullinger, 2018; Croidieu et al., 2017; Jones & Svejenova, 2018). Scholars have also explored how multimodal elements such as images and videos can be used to construct organizational legitimacy and contribute to citizens' sensemaking process (Boxenbaum et al., 2018; Cartel et al., 2018; Lefsrud et al., 2017). They also acknowledged that multimodality has the potential to help one understand "language and communication in emergence, persistence, and change of institutions" (Höllerer et al., 2018, p. 18).

In this survey, I also found that multimodal elements also contain a broad scale of phenomena such as images, videos, texts, and materials. The study of multimodal elements includes corporate social responsibility reports (Jancsary et al., 2017), posters of student movements (Zhao, 2017), advertisements and campaigns (Bullinger, 2018; Lefsrud et al., 2017), labels and bottles of wine and whiskey (Croidieu et al., 2017; Forgues & May, 2018), computer science (Eisenman, 2018; Pershina & Soppe, 2018), and architecture (Cartel et al., 2018; Jones & Svejenova, 2018; Oliveira et al., 2018).

These studies bring a wide range of elements to explore how different factors influence organizational behavior and create institutional change. In the following

paragraphs, I further explored how scholars in previous research has studied different elements, including textual, visual, and material use.

Textual elements

Many scholars have argued that traditional textual elements have been at the center of organizational study on legitimacy and framing effects (Christiansen et al., 2018; Essén & Värlander, 2018; Lefsrud et al., 2017; Gehman et al., 2017). Previous studies on change have demonstrated the power of textual discourse in shaping environmental meanings and the future practice of stakeholders. Maguire and Hardy (2009) demonstrated the power of discourse to change the perspective on the use of DDT, noting that a change of textual discourse can "undermine the institutional pillars supporting practice" (p. 148). By analyzing the texts in the multimodal campaign, Lefsrud et al. (2017) pointed out that textual elements combined with other multimodal elements such as visuals can contribute to the meaning construction process. Scholars who have studied text elements in multimodal contexts usually have adopted rhetorical analysis methods to analyze how text elements help create meanings and shape opinions.

Visual elements

Scholars have argued that the importance of visual elements has been overlooked in organizational studies (Meyer et al., 2013). Visual elements can "capture attention, problematize taken-for-granted understandings, allow for alternative interpretations and create openings for contestation" (Lefsrud et al., 2017, p. 105). Lefsrud et al. (2017) pointed out that both the organization's legitimacy and illegitimacy processes use visual elements for framing. According to Jancsary et al. (2017), institutions are multimodal accomplishments where different multimodal elements interact with one another to create meanings. They also

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noted that compared with verbal elements, visual elements are a special kind of representation that deliver an "actual sensory experience" (Jancsary et al., 2017, p. 91).

Compared with the traditional verbal elements, visual elements are "considered immediate and powerful" in the communication and meaning-making process (Oliveira et al., 2018, p. 33). Many scholars in organizational studies have used images or photographs to explore their primary focus (Christiansen et al., 2018; Shortt & Warren, 2017). Christiansen et al. (2018) wrote that even though scholars in organizational studies have conducted research on "visual framing efforts," they have overlooked how visuals can contribute to constructing meanings for the organization (p. 665). Visual elements represent how objects are "positioned about the 'gaze' of audiences" (Jones et al., 2017, p.652). Visual images are widely used by activists and organizations to provoke strong feelings toward certain issues, which can later be used to influence agenda-setting (Christiansen et al., 2018). Borrowing from the political science discipline, a key issue to influence agenda-setting is legitimizing the promoted agenda. Visual elements contribute to framing effects by "[enticing] audiences" and increasing legitimacy for organizations (Christiansen et al., 2018, p.625). In addition, "visuals are very well suited to conveying and triggering emotions" (Höllerer et al., 2018, p. 627). Visual elements constitute a significant part of "linking novel phenomena to established and taken-for-granted social categories and discourses within the social stock of knowledge" (Höllerer et al., 2018, p. 617). However, few scholars have focused on how visuals elements are used in framing environmental issues in organizational studies.

Material elements

Material elements refers to the objects, spaces, and places in which "ideas, beliefs, and values endure or decay over time" (Jones et al., 2017, p. 652). Thornton et al. (2012) stated, "By material aspects of institutions, we refer to structures and practices; by symbolic

aspects, we refer to ideation and meaning" (p. 10). Oliveira et al. (2018) noted three primary ways to imagine material elements. One is to treat material elements as concrete where concrete means that material objects not only have the ability to influence the behavior of stakeholders in the organization but also can be "used by individuals and collectives to accomplish certain kind of actions" (p. 32). The other is that material elements constitute a crucial part of the sensemaking process in which material objects are treated as bridges and carriers to represent their "symbolic functions," which are intentionally "constructed and interpreted by organizational members" (p. 33). For example, according to Blagoev et al. (2018), material objects are usually passive carriers of past experiences, which stakeholders can use to make sense of the material. Zilber's work (2018) on materiality indicated that we need to recognize that multimodal elements such as material elements, visual elements, and special elements are concrete interactions that interact. Some have argued that our ability to understand material defines how we treat and use different materials (Essén & Värlander, 2018).

In sum, many studies surveyed in the research have been primarily focused on one kind of multimodal elements, such as the textual, visual, and material aspect of the issue. However, as Christiansen et al. argued (2018), the multimodal elements are usually interactive with each other within the same issue. Thus, a more comprehensive study which exams how different elements interact with each other is needed.

Research Methods of Framing and Multimodality

Though the study of multimodal elements has only just recently gained attention, there are some dominant study methods in the study of multimodal artifacts. Meyer et al. (2013) provided a summary of popular approaches to study multimodal elements. There are five popular approaches to studying the status of multimodality: archeological, practice,

strategic, dialogical, and documenting (p. 513). Among these approaches, the first three receive relatively greater attention because they provide various grounded research methods as well as richness of data. In this study I primarily surveyed the literature according to Meyer et al.'s (2013) categorizing system.

According the Meyer et al. (2013), the most popular approach to studying multimodal elements is archeological approach. The archeological approach views visuals as the carrier of social meanings and knowledge, the primary artifact of which is photographs. Under this notion, scholars view multimodal nodes as social semiotics. The main collection method of the archeological approach is through archives and media. The dominant method of analysis includes "content analysis, rhetorical analysis, framing analysis, semiotics study, and critical analysis," and so on (Meyer et al., 2013, p. 505). Among these, critical content analysis has received the most attention (Boxenbaum et al., 2018; Croidieu et al., 2017; Höllerer et al., 2018; Jancsary et al., 2016; Pershina & Soppe, 2018). For instance, Jancsary et al. (2016) outlined how to conduct a multimodal content analysis by building on the traditional critical discourse analysis. According to Jancsary et al., (2016) there are five steps to conducting a multimodal content analysis: "characterizing the genre, . . . capturing the manifest content, . . . reconstructing latent elements, . . . composition, . . . [and] conclusions and critical evaluation" (p. 190–201).

Empirically, many previous studies fall into the category of the archeological approach. For example, by analyzing the case of the Canadian oil sands, Lefsrud et al. (2017) showed how stakeholders used "visual rhetoric in multimodal texts" to shape and reshape the organizational practice on the natural resources (p. 101). Their primary method was the "convergent mixed methods design" (Creswell, 2019). This method includes four main steps: first, identify the key points for the debates and the event; second, sample the multimodal elements and analyze how those elements connect with the key points of the debates; third,

analyze how stakeholders use multimodal elements in their legitimacy process; and fourth, examine "intertextuality to understand patterns and interactions between texts" (Lefsrud et al., 2017, p. 115). Lefsrud et al. (2017) used a different method to analyze various persuasive modes in multimodal texts. For instance, they adopted classical rhetorical analysis techniques, such as logos, pathos, and ethos, to analyze the words in the multimodal texts, as well as using Kress and van Leeuwen's social semiotics method to analyze the images in the multimodal texts. Like Ravelli and McMurtrie (2016) argued, because of the rising attention of semiotics study, it has broadened the definition of text. Everything can be viewed as texts under this notion. This leads to a broader scale of studies of social semiotic research. For example, Jancsary et al. (2016) drew on Kress and van Leeuwen's (1996) social semiotics to analyze multimodal elements, their unique contribution being that they linked social semiotics with "metafunctions" to argue that multimodal elements are a kind of special mode to create meanings (p. 88). Inspired by Kress and van Leeuwen (2001), the authors designed a method to analyze the combined visual and verbal elements by using coding techniques called "visual content analysis" (p. 96), and they pointed out that the visuals could be a bridge to connect the "cognitive and the material bases of the institutions" (p. 113). Höllerer et al. (2018) also built on the "social semiotic perspective on multimodality" to examine how multimodal elements help to generate new ideas in a relatively complex environment, namely, the 2008 global financial crisis (p. 618). They argued that the sensemaking and sensegiving processes provided a theoretical basis for their research in analyzing the *Financial Times* e-paper from 2008–2012 and drew the conclusion that multimodal elements, especially visual elements, increased the effect of sensemaking and sensegiving by enriching "the content and bolster the persuasive appeal of narratives" (p. 627).

The three works above represent the idea that when people and organizations combine different multimodal elements in a message, these elements can usually increase the

persiasiveness of the message, and visual elements usually increase the effects provided by the sensemaking and sense giving processes.

Some scholars have argued that the use of multimodal elements can increase the institutionalization of certain industries. For example, Croidieu et al. (2017) looked at how visual elements on a wine bottle label provided "a marker of a deepening institutionalization," suggesting that the label is a "camera of institutional change and persistence" (p.41). They collected 3,307 wine labels from 1924–2005, including 61 organizations, focusing on the château prefix tradition in the winemaking industry and found that when practitioners in the wine industry created their labels, "they followed artistic conventions shared by peers," which reinforced the ideology and deepened the institutionalization of the wine industry (p.53). The primary method used in their study was the historical study and the content analysis of textual and visual elements on wine bottle labels.

The next popular approach proposed by Meyer et al. (2013) is the strategic approach. The strategic approach strategically uses visual artifacts as "symbolic devices that exert influence and impact on audiences' perception and evaluation of reality" (p. 503). Typical visual artifacts include photographs, pictures, and texts. The popular methods of data analysis under this approach are statistical analysis and rhetorical analysis. We should recall the review section of framing theory in which scholars argued that framing is usually strategic, creating a desired opinion response from a target audience (Mintz & Redd, 2003). Thus, one can usually link framing effect studies with the strategic approach of a multimodal element study. For example, Myers et al. (2012) designed an experiment to test how participants responded to three different frames related to climate change. They recruited 1,127 participants online and created three experimental groups to conduct their experiment. The participants were randomly assigned to one of the climate changes frames such as "risk to the

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environment," "public health," or "national security issues" to test which frame would have a positive impact "on support for a climate change mitigation policy" (p.1105). Severson and Coleman (2015) also conducted an experimental survey to investigate how different frames influence support for positive climate change policy. They randomly assigned the recruited participants to read one of seven frames, including a control frame, two sides of the science frame, a frame which relate to religious, a frame contains secular moral information, an frame remind the audience economic equity problems, and an economic efficiency frame and answer a serious question related to the climate change policy studies (Severson & Coleman, 2015). A similar experimental method has also been used by many other scholars in their studies on environmental issues and framing effects (Aklin & Urpelainen, 2013; Feldman & Hart, 2018; Petrovic et al., 2014; Schuldt et al., 2011). Besides the popularity of the experimental method in research on framing effects, the studies mentioned above shared the practice of recruiting participants online for their experiments. The above review of the study of framing effects addressed various issues and tested many different scenarios related to environmental issues in text-related frames. Yet none of them paid attention to multimodal elements such as visual and material elements.

The third popular approach Meyer et al. (2013) proposed is the practice approach, which views visuals as an important part of social practice that is constructed by organizational contexts. The primary visual artifacts in this approach include "schematic drawings, plans, and computer aided visualizations," and so on (p. 505). The primary method and data-collection process for the practice approach is ethnographic case studies and the collection of data through "observation, interviews, and secondary data collection" (p. 505).

Building on Meyer et al.'s research (2013), Shortt and Warren (2017) provided a grounded visual pattern analysis to study the role of visuals in organizational study in which they argued that the grounded visual pattern analysis approach is a combination of the

dialogic and archaeological approaches. The experiment of combining different approach in Shortt and Warren's work (2017) opened up the possibility and legitimacy of combining multiple approaches in one study.

The study of material elements was not categorized in Meyer et al.'s research (2013), while it still constitutes an important part of multimodality research in organizational study. For instance, Boxenbaum et al. (2018) described two primary perspectives scholars use to study materiality: sociomateriality and institutionalism. Under the sociomateriality perspective, materiality is socially constructed with stakeholders' defining the boundary and meanings of it (Leonardi, 2012). Many scholars have adopted affordances theory to study materiality within various themes. Affordances theory refers to the notion that an individual behavior depends on the objectiveness of the material, as well as on how the stakeholders interpret and practice the material (Robey et al., 2012). In contrast, institutionalists view materiality as artifacts that shape and reflect social realities (Boxenbaum et al., 2018). For example, Croidieu et al. (2017) argued that institutions not only guide behavior but also provide a fundamental basis, such as identity and motivation, to solve collective action problems.

Besides these methods surveyed above, I also found a unique pattern that links classical Aristotelian theory and rhetorical analysis to the study of both multimodal element and framing studies (Christensen, 2018; Lefsrud et al., 2017; Stucki & Sager, 2018; Zhao, 2017). Aristotelian theory provides a notion that the rhetoric of a frame can be divided into three categories, logos, ethos, and pathos (Aristotle, 1984), which represent different stages of the sensemaking process. For example, Stucki and Sager (2018) connected framing theory with the Aristotelian concept to introduce a rhetorical perspective on policy frames, whereas Lefsrud et al. (2017) adopted Aristotelian theory and applied the logos, ethos, and pathos concepts to their textual rhetorical analysis in their multimodal data. On a broader scale,

Zilber (2018) described two kinds of multimodal approaches: strong and weak, he wrote that strong multimodal research raises new questions, new concepts, and new methodologies, whereas weak multimodal research "continue[s] to ask our same old modality—agnostic questions" (p. 78).

To sum up, there is a dominant method for study on both framing effects and multimodal elements. There is a trend toward using experimental and survey methods to test framing effects. By using different treatments, scholars in framing research were able to test which treatments (e.g. topic/scenario) matter more to increase the framing effects. To study images in multimodal texts, multimodal content analysis and the social semiotic method are popular, and Aristotelian rhetorical analysis is widely used in analyzing words in multimodal texts. The experimental method is more often of a quantitative nature, whereas multimodal content analysis, social semiotic method, and rhetorical analysis are qualitative in nature.

Previous studies have demonstrated that multimodal elements may have a significant impact on the legitimacy and institutionalization processes. Where they have been less clear, however, is how to transfer the socially constructed semiotics into practical meanings or organizational practice. In this paper, I argue that the framing process is a key puzzle piece in transferring social semiotics into organizational practice, thus, the connection between the two must be further explored.

DATA COLLECTION AND RESEARCH DESIGN

In this research, I connected visual, textual, and material elements to the framing process, namely, how such elements create and transfer meanings to influence social and organizational practice (Dacin et al., 2010; Hatch & Schultz, 2017). In this research, I created data sets to examine how stakeholders use multimodal elements to shape the meaning of natural resources and the future of the environment in the framing process. In this study, I focused on the debate of plastic pollution of the bottled water industry. The bottled water case allowed me to examining interactions among verbal, material, and visual elements. In the bottled water campaign, multiple elements interacting with one another where critical campaigns regarding the use of plastic for bottles use visual and verbal elements to legitimize or delegitimatize the bottled water industry. In this study, I looked at the ways in which stakeholders use multimodal elements to construct meanings of environmental issues, particularly in framing of the plastic pollution issues.

Rationale for Choosing Bottled Water Case

The data set used in this research is comprised of multimodal texts from various stakeholders' campaigns and the bottled water companies' advertisements regarding its plastic container pollution issue. The multimodal texts include labels on water bottles, advertisement of the bottled water companies and campaigns of environmental activists. Using the bottled water industry as primary data, I explored how stakeholders adopt multimodal elements to construct frames and legitimize the bottled water industry. In this study, I analyzed several types of organizational behavior that relate to the bottled water industry: normalizing bottled water consumption, delegitimizing the consumption of bottled water, delegitimizing the campaigns of bottled water manufacturer, and forming new perspectives about converting the traditional material used in the bottled water industry. By

analyzing the advertisements and social media campaigns of both the companies and activists, in this study, I found patterns of how organizations and stakeholders use multimodal elements to influence the framing processes as well as the sensemaking process of the bottled water industry.

Empirically, the rationale for choosing the bottled water industry for this study was that the use of plastic container has been contested for years, and the material used for packing bottled water has created a real threat to our environment. In December 2017, over 200 countries jointly published a special UN resolution to reduce and ultimately eliminate plastic pollution in the oceans. According to the United Nation Environment Assembly, every year, more than 13 million tons of plastic are dumped into the ocean, threatening millions of people's health. Even at a depth of 10,000 meters, there is evidence that the creatures have been polluted by chemicals and plastic products. If people do not stop or reduce the production of plastic, there will have more plastic than fish in the ocean by 2050 ("Our planet is," 2018, para. 31).

From the richness of the data perspective, the debates on the use of plastic bottles have provided me abundant types of claims, campaigns, and frames. For example, the unhealthiness of bottled water has been questioned by activists. To respond to and increase the legitimacy of the industry, many bottled water companies such as Nestle, Coca-Cola, and Fiji have launched different types of green advertising campaigns, touting their environmentally friendly plastic water bottles. In addition to the traditional campaigns, bottled water companies are also using visual images to legitimize their products. Many bottled water companies have added environmentally friendly logo to the bottle labels. For instance, the Fiji water bottle claims that, "Every drop is green," and, "Your Fiji water purchase helps reduce carbon emissions and protect Fijian rainforests." Poland Spring has a similar environmentally friendly slogan, "When it comes to the environment, we're doing

less." Meanwhile, some environmentalists have claimed that the manufacturers are lying and creating frames to legitimate their use of plastic bottles and bottled water products. A website called Tappening.com has created a series of anti-bottled water campaigns. For example, in one of their campaigns, they argued that the "bottled water is created by 98% of melted ice caps and 2% of polar bear tears" (Fiji Advertisement). In their campaign, they also argue that "if bottled water companies can lie, we can too." By analyzing the multimodal campaigns launched by various stakeholders, by conducting this study I explored how organizations and stakeholders use multimodal elements to frame, construct, legitimize, and delegitimize their practice.

Data-Collection Process

The first step of the data collection was to create a collection of data on multimodal texts. The target data of this research include both endorsed bottled water campaigns and anti-bottle campaigns (Cote & Wolfe, 2018). The sampling method began with an image search on Google using the terms "bottled water," "bottled water campaign," "bottled water advertisement," "eco-friendly bottled water," and "bottled water environment." The collection of the image under each search term was terminate when 60 percent of the search results starting to repeat. As a result, I collected total of 404 images, in which I collected 104 images under search term *bottled water advertisement*; collected 124 images under search term *bottled water campaign;* collected 84 images under search term *bottled water;* collected 82 images under search term *bottled water environment;* collected 35 images under search term *eco-friendly bottled water*. The total number of 404 images was decided based on previous research on multimodality and similar study on bottled water campaigns. The data size exceeded similar qualitative studies recently published on multimodality issue. For instance, Cote and Wolfe (2018) collected 193 bottled water campaigns in their study,

Höllerer et al. (2018) collected 229 articles in their multimodal study, and Lefsrud et al. (2017) had 200 pieces of multimodal texts in their research.

Besides the general term search for bottled water campaigns, I also included a search of specific bottled water brand names. The selected brand names were based on the top ten bottled water sales in 2017 in the United States and include brands such as Dasani, Aquafina, Nestle Pure Life, Glaceau, Smart Water, Poland Spring, Glaceau vitaminwater, Fiji, Deer Park, and Ozarka ("Sales of the," 2019). Besides these brands, I also included a company named Just Water due to the fact that this company uses paper for its bottles, created a difference between its product and the traditional plastic water bottle. The different material used by Just Water provides this company with a solid base to campaign against traditional plastic water bottle products.

The Analysis Process

To explain details about the analysis process, several main steps as well as the primary research methodology were discussed in the following paragraph. As outlined in Chart 1, in step one, after the initial collection of the data, a timeline was created for the bottled water industry campaign. According to Lefsrud et al. (2017), a timeline should be able to help scholars identify the focus and topic change of the discussion through time.

In step two, I built a collection of data sets that contain different types of multimodal texts. The collection of data contains different types of multimodal elements, such as advertising campaigns, bottled water labels, and anti-bottled water campaigns. The meaning of the multimodal texts is constructed using different semiotic codes (Kress & van Leeuwen, 1996). Categorizing data into pro-bottled water and anti-bottled water allowed me to targeted how stakeholders from different standpoints frame the same issue in different ways. I also created a spreadsheet for each data source to keep track of the sampling date, search

techniques, and descriptive information, such as how the multimodal information was coded (Cote & Wolfe, 2018).

Because the multimodal elements contain different types of information and they each need a different type of code (Christiansen et al., 2018). The third step was to analyze different multimodal elements by applying different analysis techniques to each unique multimodal element. The primary theories used in analyzing the multimodal elements was social semiotic analysis (Kress & van Leeuwen, 1996) and multimodal critical discourse analysis (Jancsary et al., 2016). The analysis process was also supplemented with rhetoric analysis theory (Aristotle, 1984) and visual framing theory (Christiansen et al., 2018; Miller, 2000) to capture how stakeholders use multimodal texts in the framing process to alter perspective and practice.

During the third step, following three stages were carried out in this study, as the details of the coding scheme outlined in the Appendix A. In stage 1, the multimodal campaign pieces were analyzed based on Wodak & Meyer's (2016) multimodal critical discourse analysis techniques. Each individual multimodal campaign was analyzed based on the general coding scheme outlined in the Appendix A. The coding sheet is modified from the multimodal critical discourse analysis method to fit the data and research questions of this research better. This first stage allowed me to analyze individual campaign and capture the critical information and relationships between different multimodal elements. In the second stage, the multimodal campaign pieces were analyzed based on Aristotle's (1984) modes of arguments method and Kress and van Leeuwen's (1996) decipher composition and the multimodal text method. In stage 2, I coded the multimodal campaigns individually according to their construction of different frames. The second stage allowed me to identify different stakeholders in the campaigns, and how these stakeholders strategically use different colors, different spatial compositions, and different Aristotle modes of argument to

construct frames. The detailed coding scheme can be found in Appendix A. In the third stage, a word frequency test and a word tree plot were deployed. The word frequency test and word tree plot analyzed all textual elements in the collected multimodal campaigns. Detailed texts list can be found in Appendix B and Appendix C. The word frequency test and word tree plot allowed me to capture the word use trend in the construction of bottled water campaigns. The three stages provided a multidimension analysis to the collected bottled water advertisement and campaigns.

The fourth step of the analysis process was to analyze the codes and compare the campaign pieces across the data to generate themes and assumptions about the multimodal texts and framing process. The research findings were then summarized, and the findings and patterns were connected to the broader themes.

The final step of the analysis process was using the generalized themes and assumptions of multimodal texts from previous steps to provide suggestions for the future research and practices.

Table 1. Research methodology chart revised from Lefsrud et al. (2017)

Step 1
Capture the critical events in the bottled water industry and create a timeline. The frame change in the timeline is the main target of this step.

Step 2
Create a collection of bottled water labels and advertising campaigns, differentiating between pro-bottled water and anti-bottled water campaigns and various multimodal elements used in the data.

Step 3a
Analyze the pro-bottled water campaign

Step 3b
Analyze the anti-bottled water campaign

Analyze the textual elements in the data.
1. Rhetoric analysis (Aristotle, 1984)
2. Framing (Miller, 2000)

Analyze visual elements in the data.
1. Semiotic analysis (Kress and van Leeuwen, 1996)
2. Multimodal critical discourse analysis (Jancsary et al., 2018)

Analyze the textual elements in the data.
1. Rhetoric analysis (Aristotle, 1984)
2. Framing (Miller ,2000)

Analyze visual elements in the data.
1. Semiotic analysis (Kress and van Leeuwen, 1996)
2. Multimodal critical discourse analysis (Jancsary et al., 2018)

Step 4
1.Generate themes and assumptions of the multimodal texts and framing process.
2. Connect the findings and patterns to the broader themes.

Step 5
Experimental survey to test assumptions generated from step four. Test different treatments to see how multimodal elements influence the tangibility of a certain frame (one frame, different treatment).

FINDINGS

How do stakeholders use different multimodal elements such as verbal, visual, and material elements to influence collective storytelling and public sensemaking on environment issues? What are the relationships between different multimodal elements? Do they display any patterns and, if so, what are they? In this section, I first demonstrated the statistical result of the multimodal data analysis. Next, I presented examples of analyzed bottled water campaigns to show the salient patterns found in the data-analysis process. Finally, I offered a word frequency queries and word tree plot results to show the verbal selection trend in the contested bottled water campaigns.

Based on my findings, the collected data can be divided into several different types of topics, including anti-bottled water campaign, the reusable water bottle campaign, bottled water advertisements, bottled water product photos, and anti-bottled-water photos. The producer of the multimodal text is primarily constituted by stakeholders such as the bottled water manufacturer, pro-bottled water organizations, anti-bottled-water activists/groups, and non-governmental organizations. Table 1 shows an overall statistical summary of the multimodal analysis results of this study.

In this study, I found that most bottled water advertisements use a combination of multimodal elements, which include visual, verbal, and material elements. The most common visual elements found in the bottled water campaigns are different colors, bottled water images, and natural sceneries. The color used in the multimodal images is mostly blue, white, green, and black in their campaigns or advertisements. Among 404 collected images, 394 images used the blue color, 404 images used white, 146 images contained green, and 40 images used black. Among 237 pro-bottled water campaigns, 201 images used blue color, 101 images used green color, 219 images used white color, and 30 images used black color.

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Among 167 anti-bottled water campaigns, 149 images used blue color, 53 images used green color, 140 images used white color, 72 images used black color. The blue, green, and white colors are commonly used to link the campaign or advertisement with natural and water concepts. Black is usually used for textual elements and the anti-bottled water campaign design. Similarly, the use of natural scenery, such as mountains, natural water, plants, and sky elements, is also common in the collected campaign images. For instance, among all collected images, 65 multimodal pieces contain sky elements, 37 contain mountain elements, 58 contain artesian water elements, and 67 contain plant elements.

From a spatial design perspective, the multimodal pieces are divided into three types. Visual elements in the central of the image, verbal elements in the central of the image, and the third kind is a balanced relationship between verbal elements and visual elements. Overall, within the 237 analyzed pro-bottled water campaigns, 106 campaigns have placed visual elements in the central, 59 campaigns have placed verbal at the central of the image, 73 campaigns have constructed a balanced spatial relationship between verbal and visual elements. For the 167 anti-bottled water campaigns, 96 campaigns have placed visual elements in the central, 55 campaigns have placed verbal at the central of the image, 36 campaigns have constructed a balanced spatial relationship between verbal and visual elements.

Table 2. Statistical summary of the multimodal analysis

Attitudes Towards Bottled Water	Pro-bottled water (*N*=237)		Anti-bottled water (*N*=167)		
Purpose of Campaign	Promote bottled water (*N*=206)	Inform the merits of bottled water (*N*=31)	Stop the bottled water consumption (*N*=43)	Encourage for alternatives (*N*=57)	Inform the damage to environment (*N*=87)
Producer & Audience	Producer: Bottled water company Audience: Mass public, Potential Customer, & Customer	Producer: Bottled water company Audience: Mass public, Potential Customer, & Customer	Producer: Anti-Bottled water Activist Audience: Mass public, Potential Customer, & Customer	Producer: Anti-Bottled water Activist Audience: Mass public, Potential Customer, & Customer	Producer: Anti-Bottled water Activist Audience: Mass public, Potential Customer, & Customer
Spatial Design	Visual Central: (*N*=99) Verbal Central: (*N*=55) Balanced: (*N*=52)	Visual Central: (*N*=7) Verbal Central: (*N*=4) Balanced: (*N*=21)	Visual Central: (*N*=15) Verbal Central: (*N*=12) Balanced: (*N*=16)	Visual Central: (*N*=22) Verbal Central: (*N*=26) Balanced: (*N*=9)	Visual Central: (*N*=59) Verbal Central: (*N*=17) Balanced: (*N*=11)
Relationship between visuals and verbal	Visual support Verbal: (*N*=120) Verbal support Visual(*N*=79)	Visual support Verbal: (*N*=23) Verbal support Visual(*N*=9)	Visual support Verbal: (*N*=28) Verbal support Visual(*N*=15)	Visual support Verbal: (*N*=33) Verbal support Visual(*N*=24)	Visual support Verbal: (*N*=32) Verbal support Visual(*N*=55)

Table 2. continued

Color Used	Blue(*N*=172) Green(*N*=83) White(*N*=188) Black(*N*=21)	Blue(*N*=29) Green(*N*=18) White(*N*=31) Black(*N*=9)	Blue(*N*=38) Green(*N*=2) White(*N*=39) Black (*N*=24)	Blue(*N*=46) Green (*N*=16) White(*N*=47) Black(*N*=24)	Blue(*N*=65) Green(*N*=35) White(*N*=64) Black(*N*=24)
Frames	Dirty bottle: (N=3) Green bottle: (N=33) Alternative bottle: (N=1) Lying bottle: (N=2) Expensive bottle: (N=5) Healthy bottle: (N=116) Ethical bottle: (N=1)	Dirty bottle: (N=0) Green bottle: (N=17) Alternative bottle: (N=0) Lying bottle: (N=0) Expensive bottle: (N=1) Healthy bottle: (N=4) Ethical bottle: (N=17)	Dirty bottle: (N=9) Green bottle: (N=0) Alternative bottle: (N=7) Lying bottle: (N=7) Expensive bottle: (N=5) Healthy bottle: (N=0) Ethical bottle: (N=0)	Dirty bottle: (N=0) Green bottle: (N=1) Alternative bottle: (N=51) Lying bottle: (N=3) Expensive bottle: (N=5) Healthy bottle: (N=0) Ethical bottle: (N=0)	Dirty bottle: (N=83) Green bottle: (N=0) Alternative bottle: (N=8) Lying bottle: (N=0) Expensive bottle: (N=3) Healthy bottle: (N=1) Ethical bottle: (N=0)
Aristotle Modes of Argument	Ethos: (N=33) Pathos: (N=116) Logos: (N=39)	Ethos(*N*=17) Pathos(*N*=15) Logos(*N*=17)	Ethos(*N*=21) Pathos(*N*=6) Logos(*N*=24)	Ethos(*N*=19) Pathos(*N*=0) Logos(*N*=27)	Ethos: (N=39) Pathos: (N=0) Logos: (N=18)

 In this study, I found that there are various producers of bottled water campaign pieces. Generally speaking, the stakeholders can be divided into two groups: (a) the pro-bottled water manufacturer and (b) the anti-bottled-water activists/groups. From the audience perspective, there are primarily three kinds of target audience groups: (a) the bottled water customer, (b) the potential bottled water customer, and (c) the general public.

For the first kind of audience (the bottled water customer), both bottled water manufacturers and anti-bottled water groups have campaigns targeting this group of

audience. For instance, bottled water manufacturer often targets existing customers to demonstrate their environmental responsibleness or ethical behavior in response to the anti-bottled water critics, whereas the anti-bottled water groups target the bottled water customers to remind them of the environmental difficulties their bottled water consumption behavior could bring.

For the second kind of audience, the potential bottled water customer, the bottled water manufacturer and anti-bottled water activists are both competing for this kind of audience. The bottled water manufacturers are targeting potential customers to purchase their products, while the anti-bottled water activists are targeting potential bottled water customers to remind them that the consumption of bottled water is not a reasonable behavior. For instance, the anti-bottled water groups offer frames where bottled water is just overpriced tap water. In the left-side picture of Figure 5, anti-bottled water activists are targeting the bottled water company Dasani and claiming, "Coca-Cola's Dasani is really overpriced tap water."

For the mass public group, both sides of the campaign are constructing a legitimate argument around their frames. The bottled water manufacturers build frames to convince the mass public that bottled water is an environmentally responsible product. For example, in Figure 4, bottled water company Nestle constructed frames that their water bottle is manufactured with less plastic and the material is 100% recyclable. While the anti-bottled water group used verifiable scientific numbers to construct frames to convince the audience that bottled water products are environmental burdens. For example, in the right-side picture of Figure 5, the anti-bottled water activists present statistics to remind the audience of how much plastic is used in manufacturing the bottled water.

Same Multimodal Elements Used by Different Stakeholders to Construct Different Frames

In this study, I found that both pro-bottled water and anti-bottled water stakeholders use the same elements to construct their campaign frames, but a different combination of the visual elements will create different narratives. For instance, in Figure 1's top part is a pro-bottled water advertisement, and there are multiple visual elements in the advertisement such as a bottled water image, mountain, artesian water, plants, and the sky. The combination of elements creates a frame wherein the bottled water is clean, natural, and "untouched" by humans. The bottom of the figure shows an anti-bottled water campaign with similar visual elements such as "natural" bottled water, plants, and sky. However, the campaign offers a negative frame regarding bottled water. Presenting multiple empty plastic water bottles in a natural environment creates a frame that waste plastic water bottles are hard to recycle and will damage the natural environment. Presenting a single clean looking-bottled water product with a natural environmental as a background creates frames wherein bottled water is clean and natural.

Figure 1. Elements in comparison: Pro-bottled water advertisement + anti-bottled water campaign examples: Top: "Fiji bottled water advertisement." Bottom: "Amrutdhara anti-bottled water campaign"

Different Spatial Designs of the Multimodal Campaigns

From a spatial design perspective, in this study, I found that there is not a dominant

strategy in the layout of a multimodal campaign. Generally speaking, the spatial design of the

campaigns can be categorized into three kinds, Figure 2 lists three different kinds of spatial

design. The examples of the spatial design are shown in Figure 2. The left image in Figure 2

shows when textual elements are posited at the edge of the image; the textual element usually

serves as a footnote to provide extra information to support or explain the visual framing. The

middle image in Figure 2 shows the textual element can also be posited in the middle of the

image to emphasize the argument, while visuals are posited as the background of the textual

elements to support the argument. The right image in Figure 2 shows that the textual and

visual elements can be mixed to deliver a unified message. Under this condition, textual

elements are usually posited as an overlay of the visual elements, while the visual elements

serve as background.
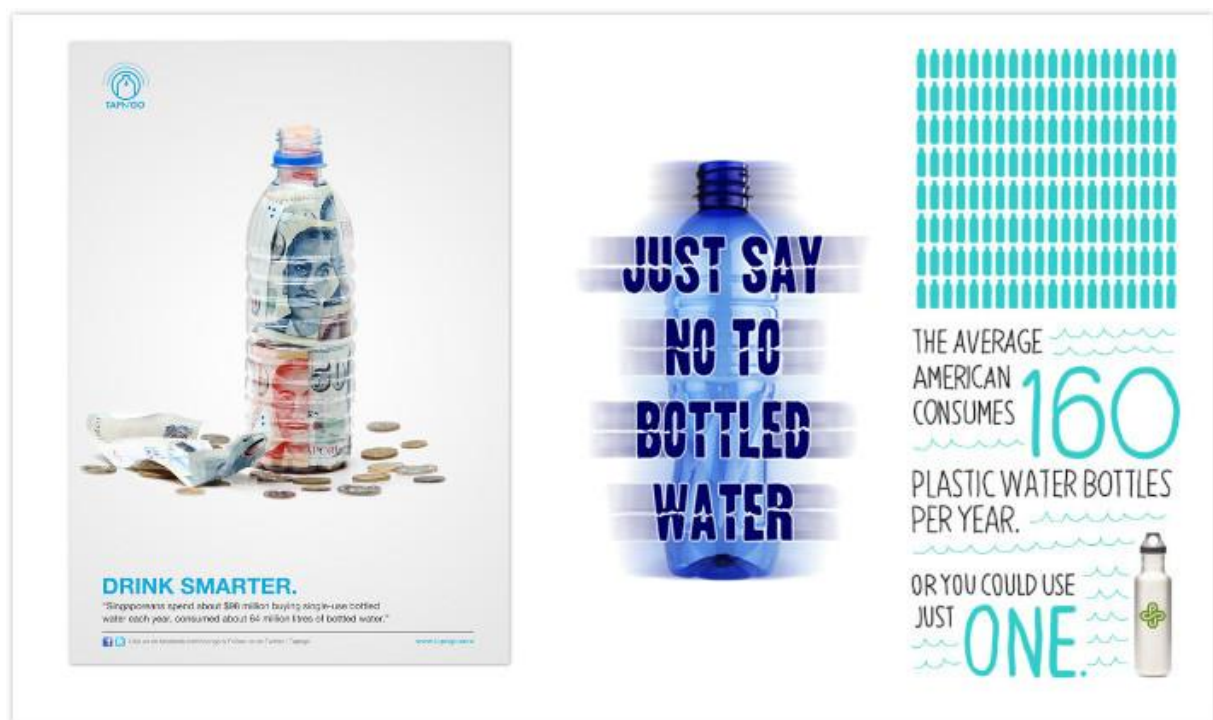
Figure 2. Visual elements are posited at central + Verbal elements posit at central + Visual & Verbal balanced examples: Left: "Tapngo anti-bottled water campaign." Middle: "Ethical Nag anti-bottled water campaign." Right: "Take back the tap anti-bottled water campaign"

Different Relationships Between Visual and Verbal Elements

The relationship between visual and textual elements in the collected data is of three

kinds. In this study, I found that the verbal and visual parts of the multimodal image often

reinforce each other. The first kind of relationship is the visual part of the image serves as a supplement to support the verbal part of image. This relationship can be commonly found in the anti-bottled water campaigns. Under this condition, the visual part usually serves as a background to remind the audience of the target of the campaign. The second kind relationship is the visual elements that play a more central role in presenting an argument as well as the textual elements serving as supplements to clarify and strengthen the arguments. Under this condition, the visual part is usually posited at the center of the image to present the target of the advertisement, while the textual part serves as a supplement to increase the creditability of the advertisement. The third relationship uses verbal and visual elements in a more balanced fashion to construct the frame. Figure 3 shows examples of the three different relationships. The top image of Figure 3 is an example of visuals supporting verbals; the middle part is the example of verbals supporting visuals; the bottom part of Figure 3 is an example of a balanced relationship.

Figure 3. Visuals support verbal + Verbal support visual + Visual & Verbal mixed examples: Top: "Surfers against sewage anti-bottled water campaign." Middle: "World Environment Day 2018 anti-bottled water poster." Bottom: "Get off the bottle anti-bottled water campaign"

<center>**Different Frames and Purpose of the Campaigns**</center>

In this study, I found that all collected multimodal campaigns can be divided into groups based on the main purpose of the campaign. The purposes of creating the multimodal piece include: (a) stop the consumption of plastic bottled water (b) promote bottled water products, (c) encourage audiences to drink from an alternative source/choose alternative multiple-use water bottle, (d) inform audiences of the positive aspects the bottled water company or products can bring, and inform audiences about the environmental difficulties brought on by bottled water.

Based on the different purposes and aims of the multimodal images, the multimodal pieces also use different frames to construct the various frames in the multimodal image. The frames used in the campaigns can be generally categorized into following types: dirty bottle, green bottle, alternative bottle, lying bottle, expensive bottle, healthy bottle, and ethical bottle. All examples of the combinations of six different purposes and seven frames are listed in the following sections. The following paragraphs is structured around different frames and purposes to show how stakeholders use various multimodal elements to construct different frames in the contested bottled water campaign.

Anti-Bottled water multimodal frames

Figure 4 is an example of stop the consumption of the plastic bottled water and lying bottle frame. Figure 4 is an anti-bottled water campaign material. The image delivers the combination of the stop the consumption of the plastic bottled water message and constructed a lying bottle frame. The group initiating the campaign is Tappening.com, who is an activate environmental group against bottled water on environmental grounds. The main purpose of this campaign is to stop the use of plastic water bottles. The campaign's primary target is the general public. The purpose of the text genre is to stop the purchase of bottled water products. The use of visuals in this campaign is institutionalized in this image. The actors

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choose to use the blue and white color which can be commonly found in bottled water related campaigns. The bottled water image is also present in the multimodal piece. By creating an intentional falsehood in the campaign, the image aims to remind the audience how untruthful the bottled water companies are about their products and the environmental impact their products bring. The multimodality used in the image is the combination of visuals, verbal, and materials. The visuals used in the image include a polar bear sitting on a melting iceberg and the melted water dropping into bottle water. The visual mode in the image focuses on the environmental aspect of the campaign, wherein the images of a polar bear and melting iceberg clearly imply the famous climate-change scenario. The verbal elements in this multimodal campaign emphasizes two targets: (a) to create a narrative to spread the untruthful information against bottled water and (b) to notify the audience that the information provided in the image is intentionally false to remind them how bottled water companies lie about their products. The materials elements presented in the image include the plastic bottle, which emphasizes that the use of plastic will results in environmental issues. By presenting an image of a polar bear sitting on a melting iceberg with the melted ice water dropping into a water bottle, the image connects the environmental crisis concept with bottled water consumption behavior. The visual elements deliver a clear image to make the argument clearer and more tangible.

The layout of the campaign can be divided into top, center, and bottom. According Van Leeuwen's (1996) method to analyze the image, we can find that the top part is usually used to present the salient information, which in this image is *bottled water*. The bottom part of the image displays textual elements. According to Kress and Van Leeuwen (1996), the bottom part usually represents the reality and the reveal of the purpose of the image: "If bottled water companies can lie, we can too". The center part of the image used mostly visual elements. According to Kress and Van Leeuwen (1996), the visuals posited in the center

usually convey the central information, whereas other elements around it "are in some sense subservient" (p. 194). In this image, the verbal and visual aspects reinforce each other. The visual elements play a more central role to present the campaign, and the textual elements serve as a supplement to clarify and strength the arguments. The visual part of the image presents the idea that the bottled water product is environmentally harmful while the role of the textual parts is to provide facts to support the visual arguments. Using "bottled water" on top of the image highlights the primary target of this campaign.

The combination of the multimodal modes creates negative, intentional untruths information about bottled water, which emphasizes how bottled water companies lie about their products and the negative environmental impact bottled water products bring. The primary frame construct in the multimodal image is that the bottled water companies propagate lies to promote bottled water products. Based on Aristotle's modes of arguments, the ethos argument in this image is quite clear. By directly calling bottled water manufacturers lairs, the campaign constructs a sentiment feeling for which purchasing bottled water products is ethically wrong. The word *truth* in the statement increases the credibility of the campaign. The pathos argument in the campaign is by calling the bottled water companies liars, the campaign has constructed a wave of angry feeling toward the bottled water company. The logos argument in the campaign is also clear in this image and usually realized through logical appeals; in this image, the logical appeal is that "find out the truth at tappenning.com or spread your own lie at startalie.com (see figure 4)".
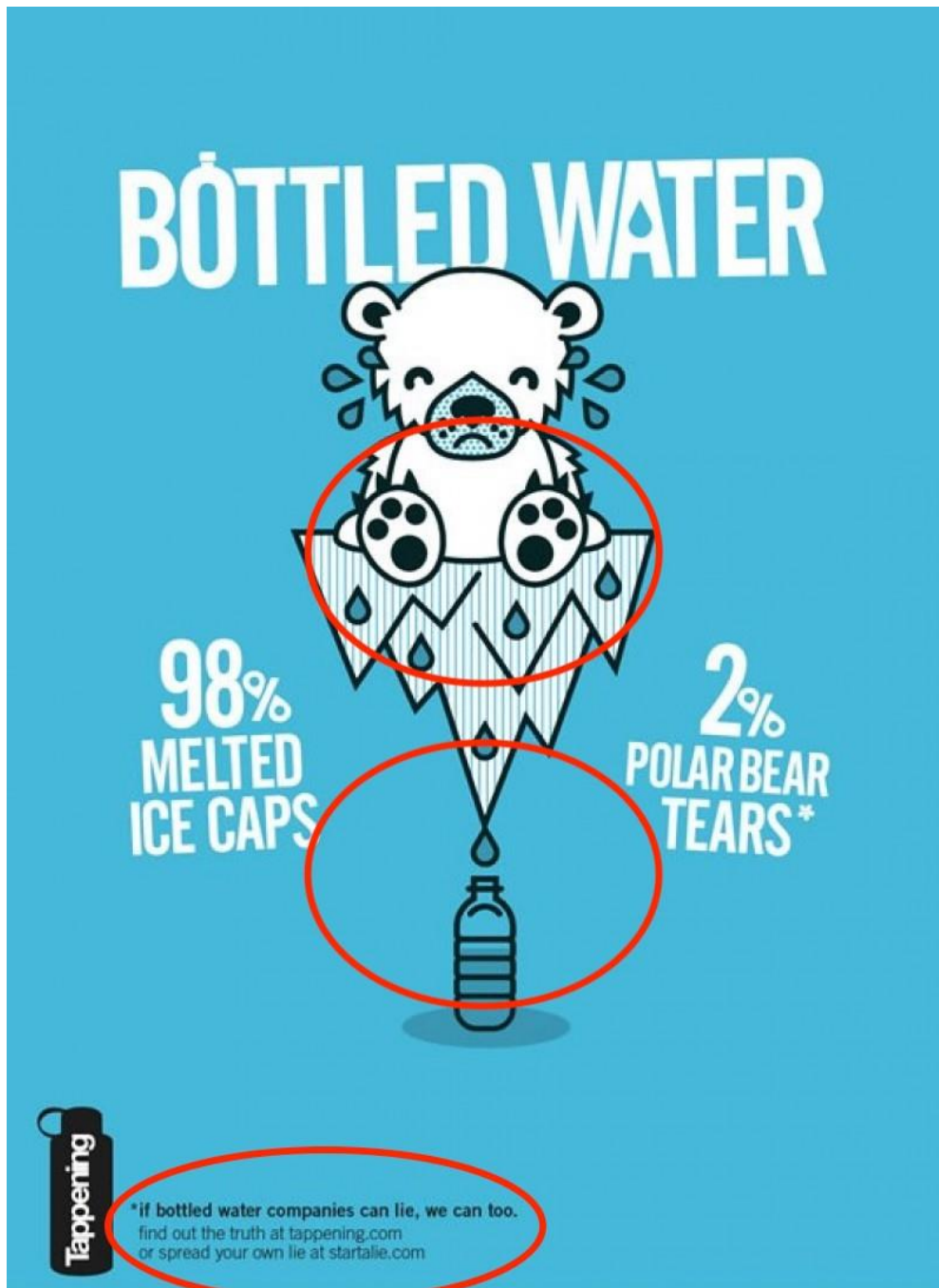
Figure 4. Stop the consumption of the plastic bottled water + lying bottle frames example: "Tappening.com anti-bottled water campaign"

Figure 5 is an example of encourage audiences to drink from the alternative source and alternative bottle frame. Figure 5 presents a combination of anti-bottled water campaign and pro-alternative source campaign. During the multimodal analysis process, I found there are primarily two kinds of suggestions for an alternative to bottled water. One kind is to

suggest multi-use water bottles. The other is to encourage the audience to drink from the tap instead of purchasing bottled water products.

On the left side of Figure 5 is an anti-bottled water campaign that combines encouraging the audience to drink from the alternative source tap water and alternative bottle frame. The producer of the multimodal text is an anti-bottled water group called "Inside the Bottle." The primary target of this campaign is the potential bottled water customer. The purpose of the multimodal text is to focus on campaigning against the consumption of bottled water. The text genre is institutionalized because the multimodal elements such as blue color, tap image, plastic bottle image, and anti-bottled water slogan are commonly used in the anti-bottled water campaigns.

The multimodal elements used in the image is primarily the combination of visuals and verbal elements. The visuals in the image include the use of blue colors and an image of a tap and plastic bottle. The verbal in the image emphasizes the goal of this anti-bottled water campaign, which is to inform the audience the bottled water filled from tap source and is overpriced by manufactures. The multimodal elements layout in this image can be analyzed horizontally and vertically. Horizontally speaking, the left side is positing with a tap and a bottle, which implies the bottled water may come directly from tap water, while on the right side is the textual element which claims that the bottled water is no different from tap water. Vertically speaking, the image contains the top part of a statement and the bottom part of the source.

In this image, the verbal and visual parts of the text support each other. The relationship among the verbal, visual, and material elements is balanced. The role of visual in this image is to show the audience the target of the campaign - bottled water. The visual elements also imply the bottled water may directly come from tap water. The verbal elements

in the image provide facts like statement to claim that bottled water is no different from tap water, except for the price.

The combination of the multimodal modes creates a frame that bottled water companies are lairs, and bottled water is just overpriced tap water. Based on Aristotle's modes of arguments, the ethos appeal in this image is realized through the right-side statement that "Coca-Cola's Dasani is really overpriced tap water." The statement weakened credibility of the bottled water campaigns. The logos appeal is also quite clear in this image. The logos appeal usually is realized through logical appeals; in this image, the logical appeal is that "You're better off with water from any public tap."

The right side of Figure 5 is an anti-bottled water campaign with a combination to encourage the audience to drink from the alternative source and use multiple reusable water bottles. The primary target of this campaign is the bottled water customer. The producer of this text is PROVOKATEUR, a London-based communication group that works for sustainability and environmental purposes. The purpose of the multimodal campaign is to encourage the audience to drink tap water and use reusable water bottles. The campaign is institutionalized; the multimodal elements used in the campaign can be commonly found in the anti-bottled water campaign. For instance, the visuals used in the image include blue and white colors and the image of a reusable water bottle. The verbal in the image emphasizes the goal of this campaign, which is to promote reusable bottle while also presenting the scientific facts to remind the audience of the negative environmental impact a wasted single-use plastic bottle can bring. The materials elements presented in this image include the plastic and metal bottles.

This campaign links the consumption of bottled water with wasting resources and a negative impact on the earth and environment. The layout of the image combines visuals and textual elements. While visual elements are present in the middle of the image to attract

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attention, textual elements are posited on the top part of the image. According to Van Leeuwen's method, the top part of such images usually presents the salient information, which in this image is the combination of vocabulary to urge customers to stop the consumption of bottled water and instead drink tap water. In this image, the verbal and visual elements reinforce and support each other. The visual part in this image serves a supplemental role to support the verbal argument. The visual part of this image is to present the products to the customer. The verbal role in this image creates frames in which plastic water bottles could be the source of environmental problems and of resource consumption. The actors also use this image to remind the audience the reusable water bottled is the best alternative to bottled water. The visuals elements are also used to provide a more direct image to the audience to introduce the alternative solution.

The combination of the multimodal modes creates a frame in which consumption of bottled water is bad for the environment and people should use reusable bottles and drink tap water. Based on Aristotle's modes of arguments, the ethos appeal in this image is realized through the statement in the middle, "Save the planet." The statement connects the ethical appeal with the consumption of the reusable water bottle. The logos appeal is also very clear in this image; the logos appeal is usually realized through logical appeals. In this image, the logical appeal appears multiple times to encourage the audience to adopt the campaign's claim: "Think globally drink locally," "drink responsibly," "quench thyself save the planet," and "impress your friends with tap's reusable water bottle."

Figure 5. Encourage the audience to drink from the alternative source and alternative bottled frame: Left: "Inside the bottle Tappening.com anti-bottled water campaign." Right: "PROVOKATEUR re-useable water bottled campaign"

Figure 6 is an example of inform audiences about environmental difficulties bottled water products bring and the dirty bottle frame. Such campaigns usually combine with dirty bottle frames when anti-bottled water campaigns aim at attacking the negative environmental impact bottled water brings. Figure 6 shows an anti-bottled water campaign using a dirty bottle frame. The actors behind this campaign is an environmental group named TurnYourTap. The main purpose of this campaign is to stop the purchase of plastic bottled water and encourage the audience to drink tap water. The purpose of the text genre is to increase awareness of the negative effects of bottled water products: "The goal is to inform viewers with dynamic imagery, engage them to take action with straight forward messaging and allow them to spread the word easily (From the campaign website)." The text genre in this campaign is institutionalized because most campaign materials are commonly used in the anti-bottled water campaigns. The multimodality used in the image is the combination of visuals, verbal, and materials. The visuals used in the image include an empty plastic bottle

and the black smog coming from the bottle's mouth. The textual elements include the words in red color "environmental impact" and black color "turn your tap." The statement links the bottled water production process to global warming issues. The primary colors selected in the image are white, red, black, and gray, where white is the background, red is for emphasized words, and black and gray relate to environmental pollution. The verbal parts connect the plastic bottle with a negative environmental impact. The materials elements present in this image include the plastic bottle, which emphasizes the material of water bottles.

By presenting an image with an empty plastic bottle and the black smog coming from the bottle's mouth, the image plots a relationship between negative environmental impact and bottled water consumption. In addition, presenting smog coming out of the bottled water can deliver a more straightforward message to connect the bottled water products with negative environmental impact. The layout of the image can be divided into two parts: top and bottom. Using Van Leeuwen's method (1996), the top part is usually presenting the salient information, which in this image is the visual elements of the plastic bottle and dark smog. The bottom part of the image is constituted by the textual elements where, according to Kress and Van Leeuwen (1996), the bottom part usually represents the reality and increases credibility as footnotes. In this image the textual part is targeting the negative environmental impact of producing plastic bottles.

In this image, the verbal and visual parts of the verbal parts mutually reinforce and support each other. The visual elements play a central role in presenting an argument, and the textual elements serve as supplements to clarify and strengthen the arguments. The visual part of the image constructs a frame that bottled water is bad for the environment while the role of the textual parts is to provide facts to support the visual arguments. By using the red-highlighted "environmental impact" and "plastic water bottle manufacturers to produce more than 2.5 million tons of carbon dioxide each year," the multimodal image successfully framed

that the bottled water industry is a major contributor to CO2 emission and climate change (see figure 6)".

The combination of the multimodal elements connects the bottled water industry with a negative environmental impact and incorporates the idea that the bottled water manufacturer is responsible for climate change. By not purchasing bottled water products, the audience could be reducing their carbon footprint. Based on Aristotle's modes of arguments, the ethos appeal in this image is realized through the bottom footnote like the statement, "Plastic water bottle manufacturers produce more than 2.5 million tons of carbon dioxide each year (see figure 6)". The fact-like statement also increases the credibility of the campaign and helping to build the ethical frame between bottled water products and global warming issues. The pathos appeal in this campaign is realized through provoking the anxiety emotions toward bottled water companies because they are a source of climate change. The logical appeal appears multiple times to encourage the audience to adopt the campaign's claims of "Help reduce global warming and your carbon footprint," and "turn your tap and drink tap water (see figure 6)".
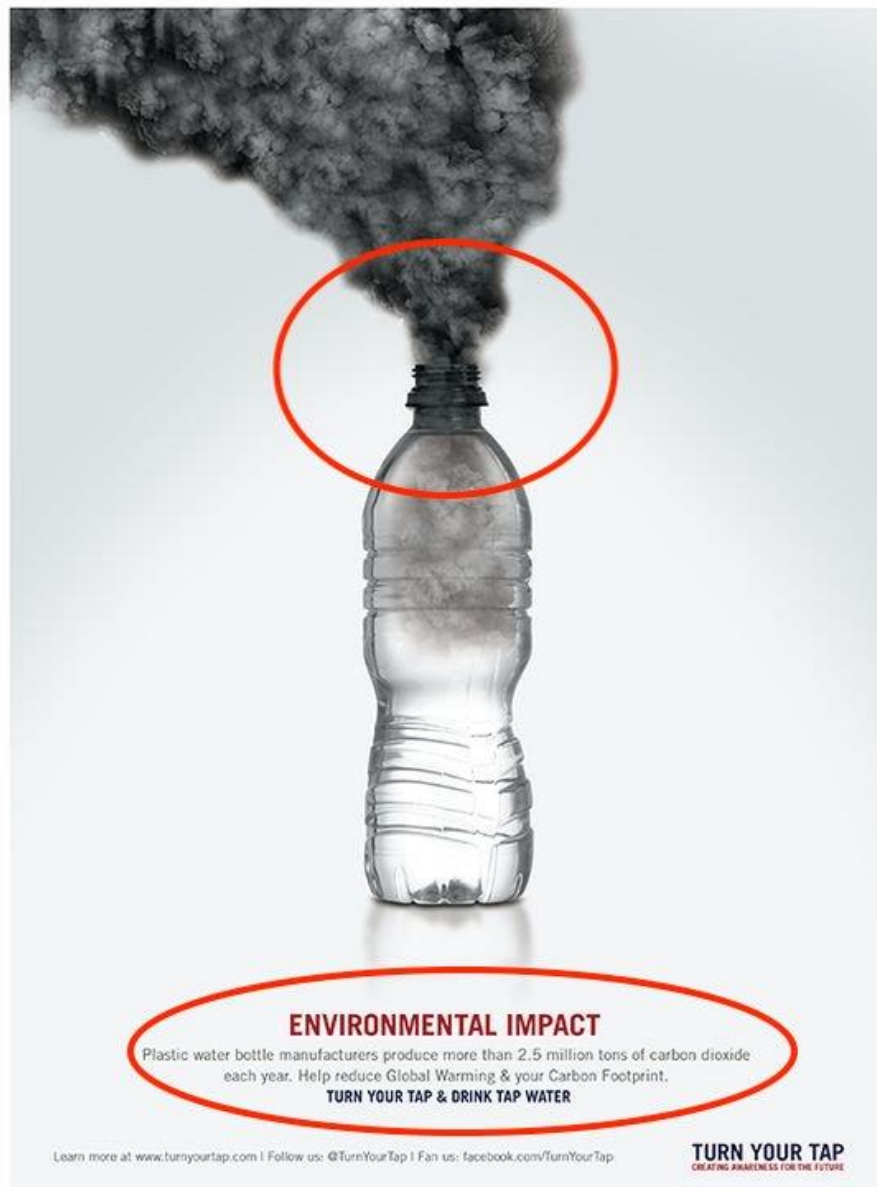
Figure 6. Inform the audience about the environmental difficulties that bottled water products bring + Dirty bottle frame example: "TurnYourTap anti-bottled water campaign"

Pro-Bottled water multimodal frames

Figure 7 is an example of promote the bottled water products and green bottle frame.

Figure 7 is a bottled water advertisement. The image's main purpose is to promote the bottled

water products. The producer of the multimodal text is a bottled water manufacture called

Poland Spring. The primary target of this advertisement should be the potential customer of

bottled water products. The multimodal elements used in the image combined visuals,

verbals, and material elements. The multimodal elements used in this campaign is institutionalized. Because most multimodal elements can be commonly seen in the bottled water advertisements, such as the water background, blue color, and eco-friendly campaign slogan. The visuals used in the image include the use of blue and green colors and the image of bottled water. The verbals in the image emphasize the merits of the product, which is eco-friendly. The material element being displayed in the image is the plastic material.

The multimodal campaign piece claims its product is eco-friendly. The layout of the image is the combination of visuals and textual elements. From a spatial design perspective, the textual elements are being posited around the visual elements. The visual part is being posited in the middle of the image to attract the attention of the audience. This kind of spatial design can be commonly found in bottled water advertisements. According to Kress and Van Leeuwen (1996), presenting the promoted product in the middle of the image, the visual elements can help the campaign to emphasize on the target product. The textual elements are usually posited around the product image to help construct positive frames about the bottled water products.

In this image, the verbal and visual parts are well combined. The visual is primarily targeted to present the product, while the verbal part presents the merits of the product. In this particular case, the verbal part is being used to construct a green bottle frame. The role of verbal in this image is to inform the readers that by using less plastic for the water bottle, the promoted product is more eco-friendly than other bottled water product. The visual elements in the image are used to present the bottled water product and make it become more tangible to the audience. In addition, the natural elements such as the blue sky and the white cloud in the background are used to link the clean and fresh feeling to the bottled water products.

The primary frame being constructed in this advertisement is that the bottled water product is eco-friendly. Based on Aristotle's modes of arguments, the ethos appeal in this

image is realized through the numbers in the advertisement: "Is 100% recyclable." "Features a new label that's 30% smaller." "Is made with 30% less plastic than the average half-liter bottle (see figure 7)". The actual numbers also increase the credibility of the campaign and also help to build the ethical green bottled frame. The green bottled frame can be commonly found in the collected pro-bottled water campaigns. The green bottle frame is also a typical response constructed by the bottled water manufacturer to respond to criticisms from anti-bottled campaigns.

Figure 7. Promote the bottled water products and green bottle frame, for example: "Nestle eco-friendly bottled water advertisement"

Figure 8 is an example of positive aspect of bottled water and green bottle frame. Beyond simply responding to the environmental criticism from the anti-bottled water counterpart and claim the products use less and/or recyclable plastic, the bottled water manufacturers also created an eco-friendly ethical frame to increase the positive aspect of bottled water products. Figure 8 is a bottled water advertisement with the main purpose to sell bottled water products while informing the audience of the positive result their consumption behavior will bring. The producer of the multimodal text is a bottled water manufacture named Fiji. The primary target of this company should be the potential customer of bottled water products. The multimodal elements used in the image is the combination of visuals, verbal, and materials. The visuals used in the image include the use of blue and green color, an image of bottled water, an image of green plants, and an image of water. The verbal in the image emphasizes the merits of the product: "Help reduce carbon emissions and protect Fijian rainforests (see figure 8)". The material element present in the image is the plastic water bottle. The use of a water image, selection of blue color, and eco-friendly campaign slogan are commonly seen in bottled water advertisements. Thus, the multimodal text genre in this image is institutionalized.

Fiji's multimodal campaign piece claims its product will help reduce carbon emission and protect rainforests. The layout of the image is the combination of visuals and textual elements, with the textual elements presented at the left of the image. The visuals are posited at the right part of the image. In this image the verbal and visual parts are well combined with each other. The visual part is primarily targeted to present the product while the verbal part presents the campaign of the advertisement. The role of verbal in this image is to inform the readers the product is from an ethical and environmentally responsible company. The visual elements in the image are to make the audience realize the target of the advertisement and make it become more tangible to the audience. The use of blue color links the water concept

to the advertisement. The green plant on the plastic bottle implies the bottled water is connect with nature.

The frame being created in the advertisement is that the consumption of bottled water could create greater good elsewhere. This Fiji advertisement claims that the consumption of Fiji bottled water would help to reduce carbon emission and protect rainforests. Based on Aristotle's modes of arguments, the advertisement itself is an ethos argument. The left bottom footnote statement, "Your Fiji Water purchase helps reduce carbon emissions and protect Fijian rainforests," increases the positive ethical feeling. The slogan "Every drop is green" also serves as a positive ethical frame. The logos appeal in this advertisement is clear; the advertisement encourages the audience to "go to fijigreen.com" to learn more about the products.

Figure 8. Inform the audience of the positive aspect of the bottled water and green bottle frame example: "Fiji eco-friendly bottled water advertisement"

Figure 9 is an example of inform the audience of the positive aspect of the bottled water and ethical bottle frame. The following example takes one step further than Figure 8. In Figure 9, the bottled water company claims the consumption of bottled water will help other people to improve their lives. Figure 9 is a pro-bottled water campaign. The image's main purpose is to sell bottled water products and inform the audience of the positive outcomes of bottled water. The producer of the multimodal text is a bottled water company called Ethos. The primary target of this company should be the potential customer of bottled water products. The purpose of the text genre is to promote bottled water products. The text genre is not thoroughly institutionalized because the advertisement targets the positive ethical aspect of bottled water. However, the selection of the multimodal elements is institutionalized. For instance, the visuals used in the image include the use of blue colors and an image of bottled water. The advertisement also uses celebrity and African children as the background to imply the products may be helpful to the African children. The verbal in the image emphasizes the merits of the product, which is to "make a difference in world water crisis (see figure 9)".

 The multimodal campaign piece claims its product will make a difference to the people suffering from the water crisis. The layout of the image is the combination of visuals and textual elements, and textual elements are being presented in the middle of the image to attract attention. The visual part is being used as a background to remind the audience of the beneficiary party of the campaign.

In this image, the verbal and visual parts are well combined. The visual part is primarily targeted to present the product and provide visual support to the verbal claims, whereas the verbal part introduces the merits of the products. The role of verbal elements in this image is to inform the readers the product is manufactured by an ethical and responsible company and the consumption of bottled water could help those who suffered from the water

crisis. The visual elements in the image are to present the bottled water product and make it become more tangible to the audience. The visual elements also imply the beneficiary party in this ethical campaign is African children.

The advertisement creates an ethical frame that the consumption of bottled water could help children in Africa to have access to clean water. Based on Aristotle's modes of arguments, the advertisement itself is a strong ethos frame. The quotation from celebrity Matt Damon also serves as ethos appeal to increase the credibility of the advertisement: "As a matter of fact, the water you drink does make a difference—Matt Damon (see figure 9)". The pathos appeal in this advertisement is realized through constructing a sympathetic feeling toward those who suffered from the water crisis, then linking the solution with bottled water products: "Every time you buy a bottled of Ethos, money goes to help provide children with the access to clean water they need (see figure 9)". The logos appeal in this advertisement is not directly presented by actual word and is instead constructing an ethical bottled water product. This "advertainment" indirectly creates a frame saying, "Buy our product because our product can help others."

Figure 9. Inform the audience of the positive aspect the bottled water company or products can bring and provide an ethical bottle frame example: "Ethos ethical bottled water advertisement"

Word Frequency Query and Word Tree Plot of the Multimodal Campaigns

In the data analysis process, there is a step called: "What is the particular 'vocabulary' of the text?" This step allows me to capture the dominate word choice within different campaigns. The keyword in the campaigns/advertisements is usually the key concepts for frame construction. The word frequency query allows me to catch the word use trend in

different campaigns and helps me to generate a clear image on how stakeholders choose words to construct frames. The word frequency query analyzed the keywords of all 404 campaign materials. The key vocabulary of the collected from the multimodal pieces included 1831 words. The detail list of keywords can be found in Appendix B. In order to get a better understanding on how different stakeholders choose keyword to construct frames, I separate the multimodal campaigns and created five different groups based on different search terms during the data collection process. Different search terms provide a common ground for various collected data. The first group is a group which includes keywords from all search terms. The second group is constituted by the data using the search term "bottled water." The third group is constituted by the data using the search term "bottled water advertisement." The fourth group is constituted by the data using the search term "bottled water campaign." The fifth group is constituted by the data using the search term "bottled water environment." The sixth group is constituted by the data using the search term "eco-friendly bottled water." The six analyzed groups cover different angels of the bottled water topic which include two pro-bottled water groups, "bottled water advertisement" and "eco-friendly bottled water." The remaining three groups are constituted by a neutral group "bottled water" and two anti-bottled water groups "bottled water campaign" and "bottled water environment."

The six different groups clearly demonstrate different word choices and topic focuses from various standpoints. For instance, the search term group "bottled water" included 82 images. This group was primarily constituted by pro-bottled water campaigns and a bottled water advertisement. The word choice in this group is clearly positive and dominate by terms such as "water," "spring," "pure," "natural," "100 percent," "bottled," and "life." A Nvivo word frequency query created word cloud demonstrates the visual representation of this word use trend in Figure 10. In this group, the word "water" appears 40 times; the word "spring"

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appears 17 times; the word "pure" appears 15 times; the word "natural" appears 14 times; word "100" appears ten times, and the word "life" appears eight times. Among the 82 collected data in this group, 12 of the images contains a negative attitude toward bottled water, and the remaining 70 images are primary pro-bottled water products images and bottled water advertisement images.

Figure 10. Word cloud of keywords under the search term "bottled water"

Overall, the keywords that appear under the search term "bottled water" demonstrate a clear word selection trend. The popular words that appear in the multimodal texts group are primarily focused on highlighting the positive aspects of bottled water, such as high quality, artesian source, and good for health. For example, the most frequently used word within the group is "water," which matches the search term "bottled water." Other popular word searches primarily focus on connecting the bottled water with its premium quality, such as "spring" and "natural," to indicate the artesian source of the bottled water. The words "pure"

implies the bottled water has high quality. The term "100" is usually combined with "percentage" or the "%" symbol, and this increases positive confirmative feelings toward the quality of bottled water. The word "life" connects the bottled water products with a positive, healthy concept. The remaining word also including the name of the bottled water brands ("Fiji" five times, "Aquafina" four times, "Evian" four times, "Smart water" four times, etc.) and other positive words such as "recycle", "balance", and "taste".

The search term group "bottled water advertisement" shares a characteristic with the search term group "bottled water." This group also is primarily constituted by a pro-bottled water word choice. Among the 104 collected images, only two images contain a negative attitude toward bottled water, and the rest of the multimodal piece is all pro-bottled water advertisement or campaigns. The most frequent appearing words include "pure" (14 times), "water" (13 times), "natural" (12 times), "less" (11 times), "taste" (11 times), "better" (10 times), "recyclable" (10 times), "spring" (9 times), "crisp" (7 times), "plastic" (7 times), and "100" (6 times). The visualized word frequency query is demonstrated in Figure 11.

Figure 11. Word cloud of keywords under the search term "bottled water advertisement"

The keywords appearing under the search term "bottled water advertisement" match the expectation of pro-bottled water campaigns. The popular words that appear in the multimodal texts group are primarily focused on the positive aspects of the bottled water, such as the quality of the water, the natural source of the water, and the environmental responsibleness of bottled water. For instance, the popular words "pure," "taste," "crisp," and "better" are selected to connect the bottled water products with its premium quality claims. While words such as "natural" and "spring" put emphasis on the artesian source of the bottled water, the words such as "recyclable," "less," and "plastic" focus on reminding the audience of the environmental responsibleness of the bottled water products. The word "100" usually combines with the word "percentage" or the "%" symbol, and this also increases the positive confirmative feelings toward bottled water. The remaining words used in the multimodal image group also share the same trajectory. For example, the words "refreshing" (6 times), "clean" (5 times), and "clear" (4 times) all put emphasis on the high quality of the water. While the words "mountain" (6 times) and "glacial" (3 times) also remind the audience of the natural source of the bottled water.

The search term group "eco-friendly bottled water" resulted in 5 images. This group was primarily constituted by pro-bottled water campaigns and environmental responsible bottled water advertisements. The word choice is positive and dominated by terms such as "eco," "plant," "recyclable," "spring," "green," and "friendly." A Nvivo-generated word frequency query created word cloud demonstrates the visual representation of the search group's "eco-friendly bottled water" in Figure 12. In this group, the word "bottle" appears 12 times; the word "water" appears 12 times: the word "100" appears 6 times: the word "plant" appears 5 times: the word "eco" appears 5 times: the word "recyclable" appears 5 times: the word "spring" appears 4 times, and the word "friendly" appears 3 times. Not surprisingly, all

35 collected multimodal pieces in this group are pro-bottled water advertisements or

campaigns.

Figure 12. Word cloud of keywords under the search term "eco-friendly bottled water"

The keywords appearing under the search term "bottled water advertisement" match

the expectation. The popular word appears in the multimodal texts groups primarily focused

on the environmental responsibleness of the bottled water. For instance, popular words

"green," "recyclable," "plastic," and "eco" are selected to connect the bottled water products

with the manufacturers' eco-friendly campaigns while reminding the audience of the

environmental responsibleness of the bottled water products. The remaining words used in

the multimodal image group are also positive and confirmative words. For example, the word

"100" (6 times) also appears in the multimodal data group to increase the confirmative

feeling toward the quality of bottled water products. The word "bottle" also becomes the

most popular words in this multimodal image group. This may occur because the container of the bottled water, the plastic bottled, is usually the target of the anti-bottled water campaigns. By emphasizing the water bottle uses "less" plastic (4 times) or uses "plant" to make plastic container (5 times), the bottled water products are "better" (2 times) for the "planet" (3 times).

As a contrast to discussing the pro-bottled water search group, I also included two anti-bottled water search groups in the data collection and analysis process. The two anti-bottled water groups being including are under the search term "bottled water campaign" and "bottled water environment." The search group "bottled water campaign" contains both pro-bottled water and anti-bottled water campaigns, while the multimodal pieces are leaning towards anti-bottled water attitudes. The data under the search term "bottled water environment" holds a clearer anti-bottled water position.

The search group "bottled water campaign," including 122 images; 39 of the multimodal pieces hold a pro-bottled water position, while the remaining 83 multimodal pieces have a negative attitude toward bottled water products. The popular words are a mixed collection of both negative anti-bottled water words and positive pro-bottled water words. The visualized word frequency query is shown in Figure 13. The positive pro-bottled water words being used are similar to the two pro-bottled water search groups mention in the previous paragraph. For instance, the pro-bottled water words most frequently used in this group are "pure" (9 times), "clean" (7 times), "taste" (7 times), "fresh" (6 times), "perfect" (5 times), and "natural" (4 times). While the anti-bottled water campaigns lean toward reminding the audience of the drawbacks of the bottled water, such as many bottled water products using the municipal water source, they are no different from "tap" water (26 times). In addition, the "recycle" problems (7 times) are also being targeted when people are campaigning against bottled water. There are also numbers used in this search group. The

numbers are primarily used as statistical facts to increase the credibly of the anti-bottled water campaigns. For instance, the number "1000" appears 5 times in this group; other numbers such as "10000," "2000," "7000," "768," "7 million," and "8 million" are used to support the anti-bottled water claims. Interestingly, even though the numbers are primarily being used as statistical facts to increase the credibility of the campaign, I found that the numbers differ when stating the same facts.
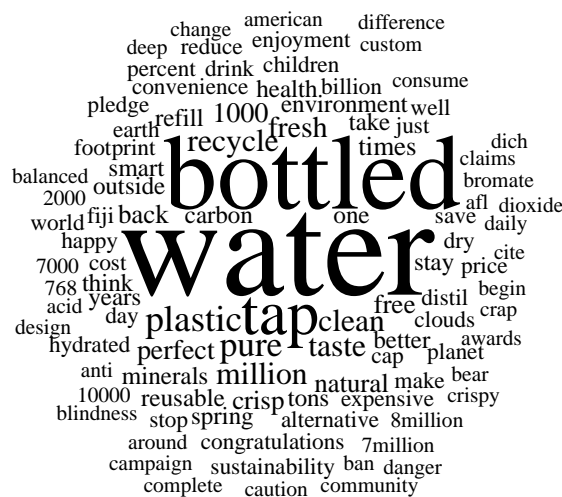
Figure 13. Word cloud of keywords under the search term "bottled water campaign"

The search group "bottled water environment" includes 47 multimodal pieces. All pieces being collected hold a negative attitude to bottled water products. This group also primarily is constituted by the anti-bottled water word choice. The most frequent appearing words include "water" (30 times), "plastic" (19 times), "recycled" (16 times), "billion" (8 times), "years" (8 times), "landfill" (7 times), "environment" (6 times), "oil" (6 times), "tap"

(6 times), "1000" (5 times), and "cost" (5 times). The visualized word frequency query is

demonstrated in Figure 14.

Figure 14. Word cloud of keywords under the search term "bottled water environment"

The keywords appearing under the search term "bottled water environment" match

the expectation. The popular words appearing in the multimodal texts group are primarily

focused on the negative aspects of bottled water, such as the recycle issue of the bottled

water, the decomposition issue of the plastic container, and the energy cost of the

manufacturing process. For instance, popular words "recycle," "plastic," and "landfill" are

selected to remind the audience of the environmental difficulties empty water bottles bring,

while whereas words such as "cost" and "oil" emphasize the energy cost of the bottled water.

The words such as "billion" and "1,000" are used as statistical facts to support the anti-

bottled water claims. The use of numeric facts in this search group is most salient compared

to other search groups. As we argued in the previous paragraph, the numbers are primarily used to increase the credibility of the campaigns.

Beyond running the frequency word query within an individual group, I also conducted a comprehensive frequency word query to show the general situation of the word used within various campaigns about bottled water. The overall word use situation is leaning toward the pro-bottled water camp. The most frequent appearing word include "water" (167 times), "bottled' (109 times), "plastic" (42 times), "recyclable" (41 times), "pure" (38 times). "spring" (35 times), "tap" (35 times), "natural" (33 times), "100" (25 times), "less" (22 times), "taste" (21 times), "better" (17 times), "clean" (15 times), "life" (12 times), "years" (12 times), "crisp" (11 times), "million" (11 times), "minerals" (11 times), "plant" (11 times), "1000" (10 times), "billion" (10 times), and "environment" (10 times). The visualized word frequency query is shown in Figure 15.

Figure 15. Word cloud of keywords under all search terms

Overall the word frequency query helps me to generate a word use trend within the bottled water campaigns. Overall, the pro-bottled water camp is more favorable toward using positive words to remind the audience about the merits of bottled water products, such as the water is "pure" (38 times) or "clean" (15 times) and usually comes from either "spring" water (35 times) or a "natural" environment (33 times); thus, the bottled water is a "better" choice (17 times) and "taste" good (21 times) while the anti-bottled water stakeholders try to remind the audience the bottled water could bring "environment" problems (10 times); the "plastic" (42 times) is hard to decompose, and the plastic may take "1000 years" (10 times) to totally dissolve in the natural environment. In addition, the anti-bottled water stakeholders also favor reminding the audience the bottled water is no different from "tap" water (35 times), and the bottled water could "cost" (7 times) more than tap water.

The word "water" and "bottled" are used by all sides of the campaigns; "plastic" is used with different meanings by both sides. I included a word tree plot graph in this study to demonstrate the word use trend in the frame construction process. The data used for word tree plot contains all verbal elements in all 404 collected multimodal pieces (See Appendix C). Figure 16 and Figure 17 are word tree graphs which demonstrate how actors use the word "plastic" in their frame construction process. For example, when the word "plastic" is used by the anti-bottled water campaigns, it usually refers to the negative aspect of the material such as plastic pollution. While, when the word plastic used in the anti-bottled water campaign, is usually combined with negative words such as "pollution", "landfill", or "not recycled". For the pro-bottled water campaigns, the mention of plastic is targeting the positive aspect of the material such as made from plant or 100% recyclable or the water bottle use 30% less plastic compare to their previous products. The use of the word "plastic" shows a typical example of how both side of the campaign use the same word to construct different verbal frames.
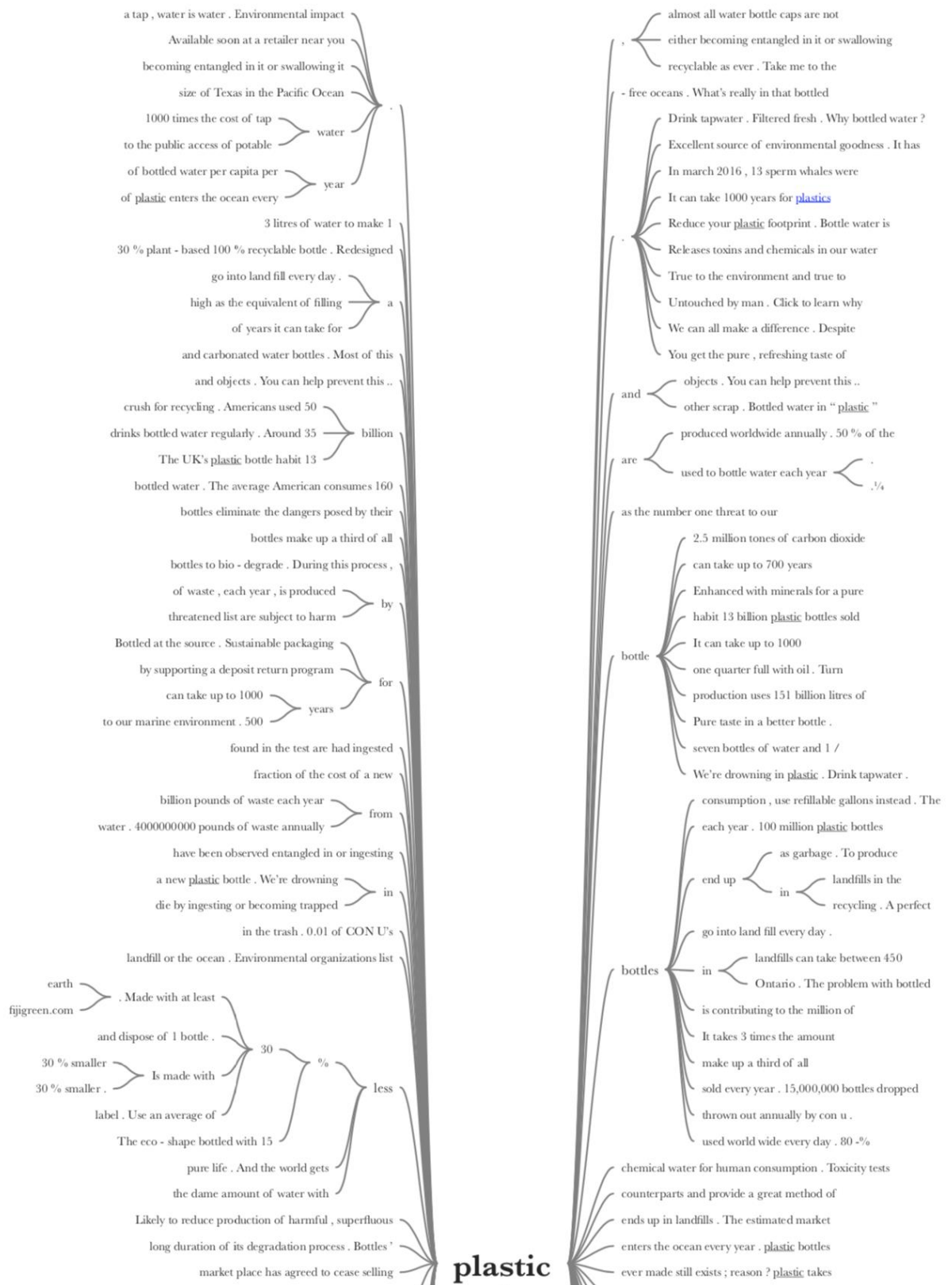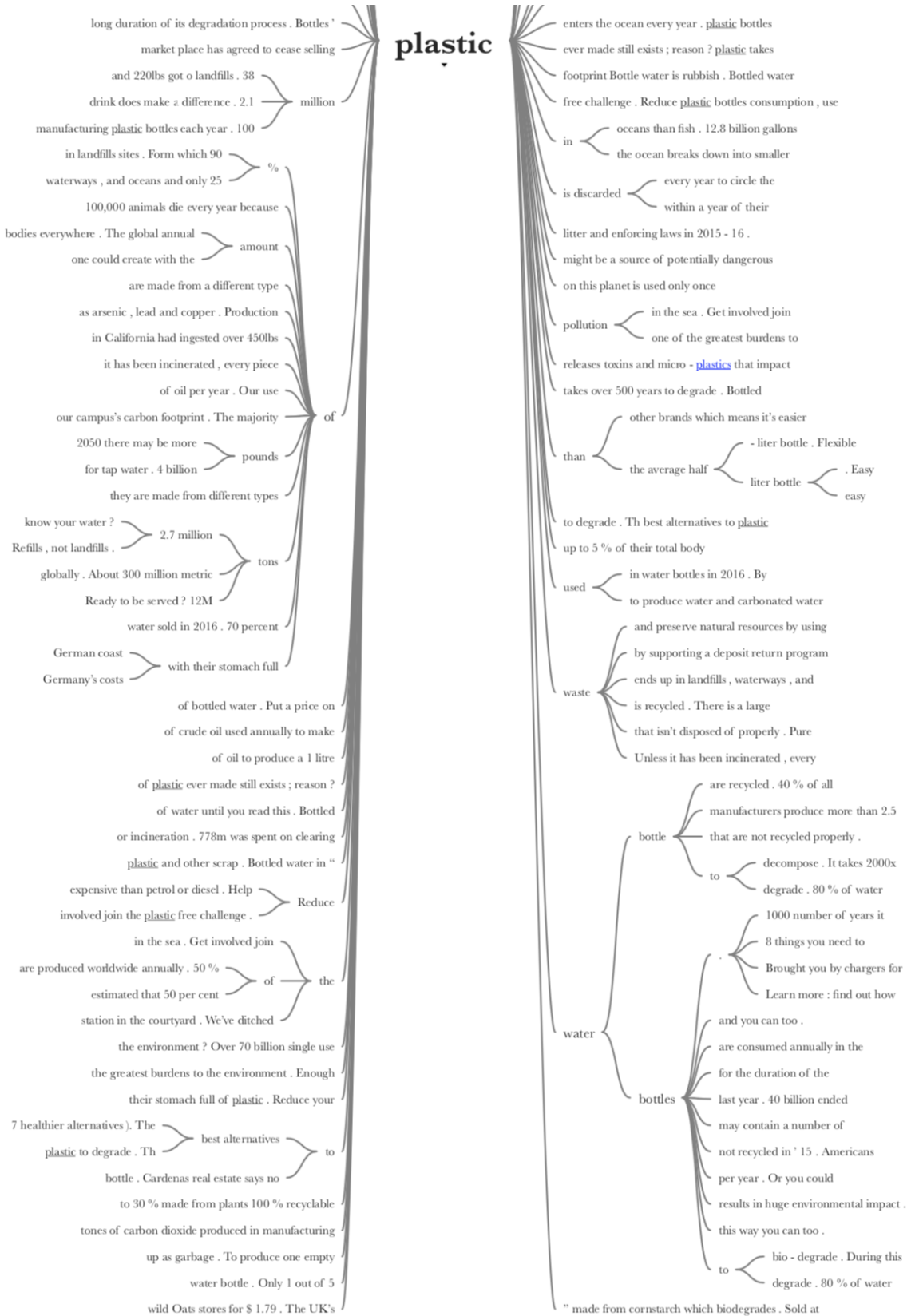
Figure 16. Word Tree plotted using the word "plastic"

Figure 16. Continued

Figure 16. Continued

Word tree centered on the word **plastic**.

Left branches:

- long duration of its degradation process . Bottles '
- market place has agreed to cease selling
- and 220lbs got o landfills . 38
- drink does make a difference . 2.1 — million
- manufacturing plastic bottles each year . 100
- in landfills sites . Form which 90 — %
- waterways , and oceans and only 25
- 100,000 animals die every year because
- bodies everywhere . The global annual — amount
- one could create with the
- are made from a different type
- as arsenic , lead and copper . Production
- in California had ingested over 450lbs
- it has been incinerated , every piece
- of oil per year . Our use
- our campus's carbon footprint . The majority — of
- 2050 there may be more — pounds
- for tap water . 4 billion
- they are made from different types
- know your water ?
- Refills , not landfills . — 2.7 million
- globally . About 300 million metric — tons
- Ready to be served ? 12M
- water sold in 2016 . 70 percent
- German coast
- Germany's costs — with their stomach full
- of bottled water . Put a price on
- of crude oil used annually to make
- of oil to produce a 1 litre
- of plastic ever made still exists ; reason ?
- of water until you read this . Bottled
- or incineration . 778m was spent on clearing
- plastic and other scrap . Bottled water in "
- expensive than petrol or diesel . Help — Reduce
- involved join the plastic free challenge .
- in the sea . Get involved join
- are produced worldwide annually . 50 % — of — the
- estimated that 50 per cent
- station in the courtyard . We've ditched
- the environment ? Over 70 billion single use
- the greatest burdens to the environment . Enough
- their stomach full of plastic . Reduce your
- 7 healthier alternatives). The
- plastic to degrade . Th — best alternatives — to
- bottle . Cardenas real estate says no
- to 30 % made from plants 100 % recyclable
- tones of carbon dioxide produced in manufacturing
- up as garbage . To produce one empty
- water bottle . Only 1 out of 5
- wild Oats stores for $ 1.79 . The UK's

Right branches:

- enters the ocean every year . plastic bottles
- ever made still exists ; reason ? plastic takes
- footprint Bottle water is rubbish . Bottled water
- free challenge . Reduce plastic bottles consumption , use
- in — oceans than fish . 12.8 billion gallons / the ocean breaks down into smaller
- is discarded — every year to circle the / within a year of their
- litter and enforcing laws in 2015 - 16 .
- might be a source of potentially dangerous
- on this planet is used only once
- pollution — in the sea . Get involved join / one of the greatest burdens to
- releases toxins and micro - plastics that impact
- takes over 500 years to degrade . Bottled
- than — other brands which means it's easier / the average half — - liter bottle . Flexible / liter bottle — . Easy / easy
- to degrade . Th best alternatives to plastic
- up to 5 % of their total body
- used — in water bottles in 2016 . By / to produce water and carbonated water
- waste — and preserve natural resources by using / by supporting a deposit return program / ends up in landfills , waterways , and / is recycled . There is a large / that isn't disposed of properly . Pure / Unless it has been incinerated , every
- bottle — are recycled . 40 % of all / manufacturers produce more than 2.5 / that are not recycled properly . / to — decompose . It takes 2000x / degrade . 80 % of water
- water — . — 1000 number of years it / 8 things you need to / Brought you by chargers for / Learn more : find out how
- and you can too .
- are consumed annually in the
- bottles — for the duration of the / last year . 40 billion ended / may contain a number of / not recycled in ' 15 . Americans / per year . Or you could / results in huge environmental impact . / this way you can too . / to — bio - degrade . During this / degrade . 80 % of water
- " made from cornstarch which biodegrades . Sold at

In sum, the multimodal analysis of the collected bottled water campaigns, provided abundant of patterns and themes regarding how different stakeholders use multimodal elements to construct frames. The reasons and logics behind these findings were discussed in the following discussion chapter.

DISCUSSION AND CONCLUSION

Based on the previous research gaps and my research interest, I constructed three research questions in the previous chapter*: How might stakeholders use multimodal elements to contribute to the framing process of environmental issues? How do stakeholders use different multimodal elements such as verbal, visual, and material elements to influence collective storytelling and public sensemaking on environmental issues? How do organizations use multimodal elements to construct frames to legitimate their products or purpose?* A multimodal analysis on the bottled water case was designed around these three research questions, and, overall, the findings of this study successfully helped me answered them. The results are consistent with my main arguments presented in the previous chapter as well.

Methodologically speaking, the previous study on multimodality has primarily relied on using single-analysis technique to study one kind of multimodal element, such as the textual, visual, or material aspects of the issue, whereas the multimodal elements are mostly complex and interactive with each other within the same issue (Christiansen et al., 2018; Feldman & Hart, 2018). Thus, in this study, I employed a method that examines how different elements interact with one another. Empirically speaking, previous studies on framing theory have focused heavily on analyzing the textual elements to measure the framing effects (Check, 2003; Myers et al., 2012; Schuldt et al., 2011; Singh & Swanson, 2017). Limited numbers of studies have expanded their vision beyond the traditional textual scope. Thus, in this study, I expanded framing study beyond its textual and effect focus and looked at framing theory through a multimodality lens. Practically speaking, many scholars working on environmental issues have failed to connect environmental obstacles with unsuccessful communication. Thus, in this study I examined communication mechanisms in

the environmental context and looked at how stakeholders associated with the contested issue of bottled water construct frames to convince their audience.

The following paragraphs discussing the research findings are structured around different analysis dimensions. In addition, in this chapter I also discussed the research's contribution, limitation, and future directions.

Using Multimodal Elements in Framing Environmental Issues

In this study, I found that multimodal elements are commonly treated as value-neutral tool kits in the bottled water campaign process. The multimodal elements were given positive or negative meanings during the frame construction process. I also found that both pro-bottled water and anti-bottled water stakeholders use the same elements to construct different frames. The same multimodal elements can be adopted to create opposing frames supporting various campaigns. For example, in this study, I found stakeholders use same visual elements in different combinations to construct different frames. In comparing the anti-bottled water campaign with the pro-bottled water advertisement, I found that the same visual elements— blue sky, artesian water source, plastic water bottle, and natural scenery—are used by both anti-bottled water and pro-bottled water camps. For example, anti-bottled water stakeholders use blue sky, artesian water source, and natural scenery to remind the audience of the environmental damage bottled water consumption could wreak, whereas pro-bottled water stakeholders use these elements to link their products with natural concepts. This finding also holds true in my findings of textual elements. For example, in this study, I found that all sides of the campaigns use the word "plastic." Anti-bottled water stakeholders use the word plastic to remind the audience that plastic is harmful to the environment, whereas pro-bottled water stakeholders use it to remind the audience that their products use less plastic and are environmentally responsible.

This finding is in line with Meyer et al.'s (2013) article on the status of visuals in different organizational contexts. Meyer et al. argued that a practical approach views visual element as "socially meaningful material objects that are created, employed, and manipulated in organizational contexts, making them a constitutive part of social practices" (Meyer et al., 2013, p. 503). The findings based on this study are consistent with Meyer et al.'s argument (2013) and expanding this argument to other multimodal elements such as textual and material elements. In the contested bottled water issue, stakeholders use multimodal elements as tools to construct different frames to shape the mass public's opinion on bottled water consumption behavior. The meanings of multimodal elements in the bottled water campaigns are socially constructed.

Previous studies have found that audiences are more likely to accept frames associated with positive ideas (Chong & Druckman, 2007; Severson & Coleman, 2015). Interestingly, in this study, I found that on the multimodal elements level, individual elements rarely display values by itself. Positive, negative, and neutral value are formed when multimodal elements constitute multimodal combinations. The design of a multimodal campaign does not have a dominant strategy. The use of multimodal elements depends on different stakeholders, campaign audiences, contexts, and the campaign's purpose.

In this study I have found three main ways in which multimodal elements are combined. In the first strategy, the visual elements support the textual elements: textual elements serve as the frames' primary elements, whereas visuals are used as supplemental icons to remind the audience of the campaign target. In this study, I found that anti-bottled water stakeholders are more likely to adopt this strategy when their campaign is targeting the environmental pollution aspect of the bottled water industry. Anti-bottled water stakeholders usually favor value-neutral scientific textual elements in their meaning construction process. This is because the value-neutral "scientific" textual element can increase the campaign's

credibility, and the negative visual image gives concrete evidence to support the environmental pollution argument. The supplement visual elements are usually associated with a negative attitude in the anti-bottled water campaign, such as the image of wasted plastic bottles or marine animals in distress to remind the audience of the damage bottled water consumption brings.

In the second strategy, the visual elements are more central to the argument, which the textual elements serve to clarify and strengthen. In this study, I found that pro-bottled water stakeholders are more likely to combine multimodal elements in this way in their advertisements. This is because the fundamental purpose of a bottled water advertisement is to promote bottled water products. A bottled water image directly delivers the product to the audience. As Oliveira et al. (2018) argued, visual elements are immediate and powerful in the communication and meaning-making process. Because an advertisement's potential audience is usually the mass public, Höllerer et al. (2013) argued that visuals are better used as primary elements to deliver the message to a broader audience. In addition, Kress and van Leeuwen (1996) argued that visuals are easier to understand because their iconic nature can transfer meanings across different contexts and cultures. The characteristics of visual elements mentioned above all helped to explain why bottled water manufactures favor using visual elements as primary elements in their pro-bottled-water frame construction.

The third strategy balances the use of verbal and visual elements, treating both as equally crucial in the construction of frames. Based on this study, I found that the selection of different types of multimodal combinations depends on the frames being constructed and the information being packed into the frames. Stakeholders on both sides likely to use this strategy.

In addition, in this study, I found that the material elements primarily served as supplemental in most of the campaigns and advertisements analyzed. Overall, the results of

study are consistent with previous studies of material elements. In this study, material elements are usually treated as objective objects; the meaning of material elements is given during the framing construction process. At this level, this study's results are consistent with previous studies' claims that stakeholders can use material elements to construct certain meanings (Oliveira et al., 2018). Different stakeholders in bottled water campaigns use material elements such as "plastic," "glass," and "paper" to achieve certain kinds of purposes. These findings relate to Blagoev et al. (2018) argument that material objects are usually passive carriers of past experiences, which stakeholders can use to make sense of the material. In contrast, when the anti-bottled-water campaigns use "plastic" material, material elements also help emphasize the negative aspects of the material, such as plastic pollution. This implies another role that material element plays in the multimodal framing process: the meaning constructor (Oliveira et al., 2018). Pro-bottled-water campaigns use material to help build positive frames such as that the plastic is made from plants, or it is 100% recyclable.

Constructing Frames Based on Different Purposes

In this study, I also found various frames created around the contested bottled water pollution issue. The construction of the frame is based on the stakeholders' purpose. Different stakeholders use different frames either to bolster the arguments or to undermine the counterarguments. The anti-bottled water stakeholders favor using a lying bottle frame or expensive bottle frame to stop or reduce bottled water consumption behavior. The pro-bottled water stakeholders favor using a green bottle frame or a healthy bottle frame to promote bottled water products. An alternative bottle frame is common in campaigns focusing on encouraging the audience to drink from an alternative source and choose an alternative multiple-use water bottle. Pro-bottled water stakeholders like to use an ethical bottle frame to inform the audience of the positive aspect the bottled water company or its products can

bring. Frames can be used to construct stories or narratives to influence people's ideas and achieve a certain purpose or outcome. Based on the findings of this study, I argue that multimodal elements can be used to form different multimodal combinations and contribute to the framing process of environmental issues as fundamental mechanisms. This argument is related to van Leeuwen's (2018) argument that "the layer of design fashions that content to express particular communicative functions, and to fit particular semiotic modes and combinations of modes" (p. 238).

Constructing Multimodal Frames to Cultivate Legitimacy

Previous studies have argued that the legitimacy issue is key to an organization's survival (Bitektine, 2011; De Vaujany & Vaast, 2016; Wasserman & Frenkel, 2011). In this study, I argue that different stakeholders have different demands for constructing legitimacy for the survival of organizations. From the manufacturer's side, legitimacy is constructed around its products because the sale of the products determines the survival of the manufacturer. In this study, I found that the bottled water manufacturer constructs frames either to inform the audience of the merits of their products or to undermine the criticisms from the anti-bottled water side. The key legitimacy target for manufacturers consists of concrete materials. While survival of the anti-bottled water organizations does not rely on the successful sale of manufactured products, their survival depends on the audience's acceptance of the anti-bottled water campaigns. For example, the anti-bottled water stakeholders need the mass public to adopt their claims and support their campaigns to continue to gain financial support for survival. Thus, the legitimacy target for an anti-bottled water organization consists of abstract ideas.

Under this notion, different organizations strategically use a different combination of multimodal elements to help construct narratives to create different levels of legitimacy.

When the manufactured products are the key to survival, the organization favors using visual elements to present the products in its campaign. For example, in this study, I found that bottled water manufacturers favor using visual elements as the dominant element, whereas the textual and material elements usually serve a supplemental role in the pro-bottled water campaigns. This is because the visual elements can directly convey the meaning and deliver the product's image to the audience (Höllerer et al., 2018). However, when frames or ideas are key to survival, textual elements become dominant in constructing the arguments. For example, in this study, I found that anti-bottled water activists commonly use a large proportion of textual elements to present scientific facts to construct the anti-bottled water frames. Textual elements can deliver more details, whereas the visual and material elements are rather abstract in constructing facts such as meanings.

Constructing Multimodal Frames using Aristotelian Modes

From the Aristotelian modes of argument perspective (1984), in this study, I found that different sides of the bottled water campaign strategically choose different modes to construct their campaigns. The Aristotelian modes of the argument claim that different modes serve as different functions in the frame construction process. The ethos mode helps establish credibility through a construct ethical argument. The pathos mode supports the frame by triggering an emotional response. The logos mode uses logical reasoning to support the argument (Aristotle, 1984). In this study, I conclude that stakeholders from different sides of the issue strategically use different modes to support their arguments. The pro-bottled water manufacturers favor using the pathos mode to construct their frames. This is because pro-bottled water manufacturers commonly target the customer's emotional aspect. Bottled water manufacturers use many techniques to construct frames where drinking bottled water becomes emotionally joyful. For example, presenting natural scenery or artisan water

connects the bottled water products with a joyful natural feeling, whereas the anti-bottled water stakeholders favor using the ethos mode to construct the anti-bottled water frame: the dirty bottle frame presents images of polluted natural environments or distressed marine animals to construct a frame in which the consumption of bottled water is not ethical. Overall, different argument modes have different advantages in constructing various frames. Campaigns commonly adopt the ethos mode for contested ethical issues. The ethical appeal helps to establish trust and credibility between the producer and the audience. To trigger an emotional response from the audience, stakeholders adopt the pathos mode. The emotional response usually provides psychological motivations to the campaign target. The logos mode uses logical reasoning to help the campaign increase its credibility.

Contributions

This study contributes to both the empirical and methodological development of multimodality and framing research. In addition, this study also provides a practical contribution describing how to construct a more efficient environmental campaign. Every contribution was discussed separately in the following paragraphs.

This study's first contribution is to answer Höllerer et al.'s (2018) recent calls for a look beyond the traditional organizational field and to introduce a new perspective on questions of multimodality. In this study, I connected framing theory with multimodality. The previous study on framing theory focused heavily on analyzing the textual aspect of campaigns to measure the effects of framing. In this study, I analyzed framing theory from a micro multimodal elements level and linked multimodal elements with framing theory. In this study, I found that multimodal elements play a crucial role in the construction of frames. The multimodal elements, when treated as a tool kit, can influence public sensemaking through the framing process and shape public opinion, policy development, and organizational

practice. In this study, I found that multimodal elements are usually assigned neutral values; the stakeholders choose different multimodal elements in their frame construction process and give multimodal elements meanings and values. For example, visual elements such as color could be value-neutral elements, whereas in a bottled water campaign the green color acquires positive value because the audience associates green with nature.

This study's second contribution is its answer to Zilber's (2018) calls for innovating research methodology on multimodal research and Höllerer et al.'s (2018) call for combining different approaches to study multimodality. By combining multiple multimodal analysis methods, I make contributions to the development of a method for examining multimodality in organizational studies. In this study, I have provided an example of combining different multimodal analysis techniques to study one empirical case. The combination of research methods provides me with a broader perspective to analyze multimodal elements robustly. In this study, I combined multiple techniques such as Wodak and Meyer's (2016) multimodal critical discourse analysis, Kress and Van Leeuwen's (1996) deciphering of composition and the multimodal text, and Aristotle's (1984) modes of argument to analyze the multimodal data. Wodak and Meyer's (2016) multimodal critical discourse analysis allows me to capture and analyze the key information of multimodal contents. Kress and Van Leeuwen's (1996) method provides insights into visual elements analysis from a spatial composition perspective. Aristotle's (1984) modes of arguments allows me to analyze the use of multimodal elements through the strategic lens. The combination of the different methods makes it possible to explore different dimensions of multimodal elements.

The study's third contribution, in analyzing how multimodal elements influence the framing process, is to provide practical support for decision-makers and agenda-setters on environmental issues. Multimodal elements are a crucial tool for organizations to legitimize their behavior or products within the framing process. (Bitektine, 2011; De Vaujany & Vaast,

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2016; Wasserman & Frenkel, 2011). Previous scholars have established that an expert position is crucial in the legitimacy construction process. (Christiansen et al., 2018; Höllerer et al., 2013; Lefsrud & Meyer, 2012). For example, Christiansen et al. (2018) showed how visuals help organizations establish an expert position on an issue (Responsible Drinking). This study contributes to legitimacy theory in finding that a key to establishing an expert position is to construct a trustworthy frame to convince the audience. Multimodal elements help stakeholders construct a trustworthy frame to establish an expert position in the issue field. In addition, previous works such as Christiansen et al.'s (2018) work focused on only one organization and how that organization constructed expert identity in its issue field. Christiansen et al.' (2018) acknowledged that a study beyond individual organization will contribute to better understanding of the issue. In this study, I completed her work by extending the analysis scope to multiple stakeholders in the bottled water issue field. In this study, different stakeholders use multimodal elements to construct frames and cultivate legitimacy for their own survival. Pro-bottled water manufacturers need legitimacy for their products, whereas anti-bottled water stakeholders need legitimacy for their anti-bottled water campaigns. Different organizations need different kinds of legitimacy based on their purpose and audience.

Finally, in the study, I found that there are barriers that prevent certain campaigns from constructing positive frames, which explains why some environmental campaigns do not achieve their ideal outcome. For example, it is difficult for the anti-bottled water activist to construct a positive frame in opposition to the sale of bottled water. This is because anti-bottled water campaigns often construct frames around the negative aspect to criticize bottled water products. This example highlights the challenges of many environmental protection campaigns. Previous framing studies have shown that stakeholders have more ability to cultivate support when their campaigns are associated with positive ideas (Chong &

Druckman, 2007; Severson and Coleman, 2015). In this study, I found that it is difficult to construct a positive frame when criticizing something. This may partially explain why environmental protection campaigns find it difficult to achieve the ideal outcome. In this study, I found that some of the anti-bottled water activists are constructing positive frames around alternative solutions. For environmental activities, this provides an inspiration for constructing positive frames. Based on this finding, I suggest that future environmental campaigns could construct positive frames to provide alternative solutions. It is easier to construct a positive frame around alternative solutions because the alternative solution is comparable to a new product. Environmentalists can use complementary alternative solutions to construct positive frames. Thus, rather than create negative frames to criticize harmful environmental behavior, environmental activists could provide more positive alternative campaign strategies and thus gain more support in their future campaigns.

Limitations

Because of particular philosophical assumptions, this study is limited by its qualitative nature, which means it cannot address issues such as the effectiveness of the frames discussed or measure the degree to which each multimodal element contributes to the framing of an issue.

The primary multimodal analysis used in this study can successfully explain how stakeholders strategically construct frames and meanings around a contested issue; however, it cannot explain "why they have developed the way they have" (van Leeuwen, 2018, p. 239). Thus, a study with historical perspective in the future might help moderate this limitation.

Further, in this research, I studied framing issues relative to audiences related to the social support of bottled water issues. How naming issue relates to consumers, and consumption was not examined in this study. A future research, with an inclusion of a

perspective on naming issues, might help us to understand how naming and branding influence the consumption behavior.

Finally, this study was coded by a single person; the coding bias could not be completely eliminated during the coding process. Limited time and funding prevented the deployment of cross-coding in this study. Scholars in the future should include a second coder.

Future Study

The Future study of this issue can be improved by the supplement of a quantitative experimental study to test the themes and theories generated from the qualitative study. Combining quantitative and qualitative methods will increase our understanding of how multimodal elements, as a mechanism, influence framing effects on environmental issues. As such, the experimental survey will help to test themes and claims generated from the multimodal analysis. In addition, the mixed-methods approach can provide a deeper understanding of the research question than can an individual method (Creswell, 2009). Rockstrom (2013) argued that a systemic perspective and integrated approach, which constitutes an interdisciplinary study, can help solve the complex environmental problem.

By conducting an experimental online survey, I will examine propositions on (a) whether multimodal elements can influence the framing effects on environmental issues, (b) whether the inclusion of different multimodal elements influences framing effects, (c) how each element contributes to the framing process, and (d) whether different kinds of multimodal elements, such as textual, martial, and visual elements, and different combinations of these elements, can have different effects on the framing and sense-making processes.

An experimental survey will help to test these hypotheses. There will be several kinds of treatments in the experiments. The first treatment is a purely textual cover story of how the bottled water industry threatens marine animals and the global environment. This treatment focuses on the effects of text-related framing effects. The second treatment is an image of marine animals killed by plastic pollution. This treatment focuses on the effects of visual elements. The third treatment is a combination of the visual and textual elements that describe the risks of bottled water. The fourth treatment is a campaign suggesting the use of alternative materials by the bottled water industry. The last treatment is a current campaign of a bottled water company that claims their plastic container is "green" or "environmentally friendly." By manipulating the multimodal elements, the different treatments will allow me to test whether the different elements would make a certain frame more or less tangible to the audience.

The participants in this study will be recruited from Amazon.com's Mechanical Turk (Mturk) website, an online labor market for experimental research. The call for volunteers will ask for people willing to confess "attitudes toward the bottled water industry." In all, I plan to recruit 200 volunteers (50 per treatment condition). After signing up for the study, volunteers will be directed to purdue.qualtrics.com/ControlPanel, an online research platform for conducting experiments developed by Qualtrics Technologies Inc. Participants who receive access to this website will be able to complete the experiment from any location with internet access. Before formally starting the experiment, all participants will be asked to complete a consent form that generally describes the research and lays out the main risks associated with participating. (Breach of confidentiality is the most serious risk associated with this study.)

If subjects choose not to participate in the experiment, they will be thanked for their time and taken directly to the end of the experiment. Subjects who decline to participate will

not be penalized. Everyone who consents to participate will receive a series of demographic questions of various topics (e.g., gender, race, nationality). This pilot questionnaire will be used to collect information on respondents' personal situations to identify whether education level, income level, or racial identity influence people's attitudes. After completing the preliminary questions, subjects will be randomly assigned to the experimental conditions. Assignment of subjects to conditions will be completed automatically using the experiment's website's random number generator.

Some readers may feel skeptical about the use of subjects recruited from Mturk. However, Berinsky et al. (2012) suggested that Mturk was a proper source for recruiting volunteers for experiments. The authors argued, "Mturk subjects are often more representative of the general population and substantially less expensive to recruit" (p. 366). Recent research on the framing effect used online surveys to collect experimental data (Aklin & Urpelainen, 2013; Feldman & Hart, 2018; Petrovic et al., 2014; Schuldt et al., 2011). Severson and Coleman (2015) stated that when research interests are focused on "treatment effects rather than level effects" (p. 1283), Mturk becomes a legitimate and efficient tool to conduct an experimental study. In this experiment, I chose Mturk to collect data because of the limitations of funds and time.

Conclusion

In this study, I examined how various stakeholders in organizations use multimodal elements (e.g., visual, material, and textual elements) to shape environmental meaning through the framing process. In this study, I adopted a mixed multimodal analysis approach to examine the frame construction process around the contested bottled water issue. I compared bottled water campaigns from both pro-bottled water and anti-bottled water perspectives. After examining a total of 404 pieces of bottled water campaign materials, this

multimodal analysis result suggests that multimodal elements are commonly treated as value-neutral tool kits in the bottled water campaign process. The combination of different multimodal research methods provides a more comprehensive perspective for looking at multimodal elements. Further, based on this study, I argue that multimodal elements were given positive or negative meanings during the frame construction process. Different multimodal elements such as visual, verbal, and material elements play a different role in the construction of different frames. Different organizations strategically design different combinations of multimodal elements to help construct frames to legitimize either the organization's behavior or its existence.

Although previous findings indicated that stakeholders would have more ability to cultivate support when their campaigns are associated with positive ideas, this study helped me revealed the existence of barriers that keep certain campaigns from constructing positive frames. Constructing positive frames around criticisms is difficult. By analyzing the collected data, I argue that constructing positive frames around alternative solutions would be easier. Future researchers should consider conducting a quantitative experimental study to investigate the effects of each kind of multimodal combinations. Regardless, this study contributes to a better understanding of the framing process through the multimodality lens and provides some practical suggestions to decision-makers and agenda setters involved in environmental issues.

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APPENDIX A. GENERAL CODING SCHEME

Primary Analysis Techniques Incorporated and Modified:

Multimodal critical discourse analysis (Wodak & Meyer, 2016).

Decipher composition and the multimodal text (Kress & Van Leeuwen, 1996).

Aristotle's mode of argument (Aristotle, 1984).

Stage 1. Multimodal Critical discourse analysis:

Step 1: (Method adopted and modified from Wodak & Meyer, 2016). Characterizing the genre: There are a number of central questions to ask about a genre and its key dimensions, several of which we wish to emphasize in the following:

- *What is the general context of the text?*
- *Who is the producer, and who is the audience?*
- *What is the purpose of the text genre? How institutionalized is the text genre?*
- *What are the particular genre characteristics with regard to multimodality?*

Step 2: (Method adopted and modified from Wodak & Meyer, 2016). Capturing the manifest content: Analyzing the manifest content of a text can take on a variety of forms, all of which are different approaches to content analysis. The primary function of this step is to sensitize the researchers for the "language" of the text, as well as its most dominant features. As such, this step focuses on the conventional meaning of words and visual elements. We propose the following guiding questions:

- *What is the particular "vocabulary" of the text?*
- *What kind of rhetorical and stylistic techniques and strategies are used?*
- *How can the "design" and "layout" of the overall text be described?*

Step 3: (Method adopted and modified from Kress & van Leeuwen, 1996). A third step focuses on reconstructing the effects of "composing" multimodal texts in particular ways.

- *How do verbal and visual elements relate to each other?*
- *What are the particular "roles" and "functions" of the verbal and the visual within the text?*
- *What integrated "messages" or "narratives" are created through this composition?*

Stage 2. Extra Coding as Supplement to Multimodal Critical Discourse Analysis:

- *Frames in Campaigns (Dirty bottle, Green bottle, Alternative bottle, Lying bottle, Expensive bottle, etc.).*
- *Colors used (white, blue, black, etc.).*
- *Aristotle's Modes of arguments (*Method adopted and modified from Aristotle, 1984*).*
Ethos: Ethical appeal, targeting ethical response and establishing a credible source (Aristotle, 1984).
Pathos: Emotional appeal, persuasion via emotions (Aristotle, 1984).
Logos: Logical appeal, use of logical reasoning (Aristotle, 1984).
- *Stakeholders in the image: (bottled water company, anti-bottled water group, alternative bottled water manufacturer, etc.).*
- *Attitude towards bottled water (Pro, anti, mix, alternative, neutral, etc.).*
- *Attitude Direction of the image (positive-negative).*
- *Type of the image (bottled water advertisement, anti-bottled water campaign, etc.).*

APPENDIX B. KEY WORDS LIST FOR WORD FREQUENCY QUERY

Search Term: Bottled Water Campaign
"Bottled water", "tears, "Lies", "truth", "polar bear", "ice caps. "Pure", "infinity", 'superb', 'simple', "refreshing", "cost effective". "bottle", "tap water, "expensive", "reusable" "Environmental impact, "plastic water bottle", "carbon dioxide", "global warming, "carbon footprint", "tap water". "tapping", "reusable", 'successful', "bottled water". "own bottle 'stop", "earth", "resource". "think, "recycle", "environment", "littering". 'smart", "98 million", "64 million" "dry", "clouds", "clean", "crisp taste. Health "think", "outside, "bottle". "world water day", "pure", "fresh", "water". "7000 times, "bottled water", "faucet" "Pure life" "Begin". "Fearless", "Natural", "Mineral", 'spontaneous". "Balanced", "well", "water". "2.7 million", "tap", 'save the planet', "bottle". 'spring water", "crispy taste, "recycle", 'sustains', "wellbeing" "bottled water", "1000 times", "1000 years", "768.1 millions". "reduce", "plastic", "footprint". "taste", "pure", "perfect", "crisp taste", "recycle". "bottled water", "tap". "Bottled water", "acid rains, "playground", "blindness", "puppies". "5% back to the water project". 'stop, "Caution", "Danger". "bottle water", "tap water, "expensive". "bottled water", "2000 times", "tap water", "64 percent", "40 gallon". "American", "Consume", "just one", "plastic water bottle". "bottled water", "1000 times", "tap water", "1000 years", "80% not recycled". 'say no", 'single use, "bottle". "most", "complete", "bottled water". "warning", "disclaimer", "bromate. "rehash", "no trash", 'safe' 'stylish' 'steel". "plastic", "tap water", "filtered fresh" "drowning. "bottled water", "tap", 'sustainability". 'spring water", "clouds", "clean", "crisp taste". "Gatorade", "Water". "bottled water", "tap", "alternative". "Ban", "Bottle". "Bottle Water", "Free Zone". "Anti-bottled water". "Don't" "Naive" "Bottled Water". "bottle water", "plastic bottle, "gasoline" "drink up." "distil water, "planet", "glaceau", 'smart water", "electrolytes". "Bottle Water", "Free Day. 'say no" "bottled water". "downpour", 'spring distilled", "clean", "crisp taste. "stay hydrated", "daily intake", "enough. "natural water", "our land, "take back", "tap". "bottled water", "tap", "pledge". "take back", "tap" "refills" "not landfills". "bottle", "tap water, "2.8million tons". "stay hydrated", "stay healthy, "congratulations" "served", "bottle service". "12 million tons", "one third", "plastic bottle", "refill". "reduce" "plastic bottle" "refillable" "environment". "say no" "bottled water". "dry", "heroes". "helping children get clean water". "phony", "tap", "overpriced", "crap". "makes you stronger", "malnutrition", "children". "the cap" "the seal" "the size" "the design". "convenience", "better water" "pure water", "water", "heaven", "tap that". "custom", "convenient 'smart" "clean". "take back" "tap". "water", "pHenomenal". "matter of fact", "make a difference". "empty bottle" "drinking water". "deep", "riverrock". "bottled water", "1000 years", "2.1 million", "recycle", "25 percent". "perfect", "minerals" "keep you fresh" "better water" "pure", "AFL" "PUMP UP" "team", "water bottles", "3 billion pounds", "recycle". "Obama, "bottled water", "congratulations" "clean water" "donate". "save water" "precious". "impress" "ideal". "Just", "Water". "fine water", "taste awards" "natural carbonation" "Fiji". "kid around the world", "dirty water" "bottled water". "We are Fiji". "one less". "weather", "hot" "heat" "thirst", "tap water", "dich plastic" "go green". "price", "value" "bottled water". "perfect", "minerals" "fresh" "better water" "pure", "water on tap", "campaign". "Pure enjoyment", "fresh", "perfect", "happy". "cite your sources". "bottled water", "2.7million tons", "2.1 million", "1.7 billion rand". 'student" "ready" "change". "untouched". "bottled water", "rubbish" "responsibly". "water", 'soda', "10000% higher". "reassessment", "drowsiness" "exploitation" "harmful". "Tap water", "Tap water", "unvalidated claims" "Disease" "unnecessary waste". "plastic water bottle", "individual heath", "community

health" "health of the environment". "tap in" "outside the bottle". "bottled water", "bottled water free". "water bottles", "recycled" "pledge. "bottle free", "think", "outside, "bottle". "bottle water", "tap", "price". "bottle water", "tap", "cost". "earth" "protects" "nature". "bottled water", "tap", "alternative". "reusable", "plastic" "clean water". "Pure enjoyment", "fresh", "perfect", "happy".

Search Term: Bottled Water Advertisement

"balance", "body", "mind", 'soul. "untouched". "drink pure", "live long". "pure", "clear", "admire", "refreshing", "Crystal", "Clarity", "Natural", "Refreshing", "Minerals", "rippling", 'smooth", "radiant", "transparent". "environment", "doing less", "dye-free", "less paper", "less plastic" "recycle" "stay healthy", "stay hydrated". "hydration is healthy", "drink up" "planet". "less", "pumped" "guaranteed" "free". "Evian" "live young". "green", "reduce" "carbon emission" "rainforest". "Recyclable", "less plastic" "eco" "30% less". "untouched" "green". "Pure enjoyment", "fresh", "perfect", "happy". "renewable", "plant-based" "protects" "100% recyclable". "Pure", "naturally". "Recyclable", "less plastic" "easy" "30% less" 'smaller". "quickly" "tap". "natural spring", "balance", "better", "refresh", "Purity", "Guaranteed". "dry", "clouds", "clean", "crisp taste. "energy", "plastic bottle, "oil" "impact". "Aqua Blue". "matter of fact", "make a difference". "mountain", 'sweet", "taste", "purity". "uplift", "best", "reveal". "Aqua Minerale". 'strong" "together" "natural mineral water" "pure taste", "better bottle" "planet". "LIFE WTR". "AQUA CHEM" "water solution" "taste", "pure", "perfect", "crisp taste", "recycle". "enjoy" 'summer vacation, "worth paying for" "pure" "earth". "nestle said", "recycled", "environmentally responsible". "earth", "protects" "nature". "unforgettable, "experience". "AQUA CARPATICA. "30% made from plants", "better design" "plant". "naturally", "glass" 'spring" "premium" "VOSS" "artesian" "water". "WALES" "pure" "smart water", "Pure life" "Begin". "better for you", "better price". spring water", "clouds", "clean", "crisp taste". 'sports bottle" "extra grip", "purifying". "Healthy Alert" "bacteria", "U.S. embassy recommend" 'safe" "highest quality". "plant bottle", "planet", "footprint", "resource", "30%" "100% recyclable". "The workout water" "0 calories" "vitamins" "flavor". 'suck it up", "dammit". "100% natural", "nothing else" "refreshingly". "power couple" "running mate" "purity", "taste of paradise". "untouched". "pure", "artesian" 'spring fresh". "weather", "hot" "heat" "thirst", "quenches", "thirstiest" "even" "condition". "born better". "natural", "glacial" "clear" "premium" 'sustainability". "ARROWHEAD" "100% mountain spring water". "clouds", "nature", "crisp". "plant bottle", "redesigned", "plastic", "recyclable", "30%" "100% recyclable". "Woodworth". "water". "fashionably thinner", "eco-shape", "less plastic", "difference". "despite", "tap water", "regulation". "GEROLSTEINER" "ICELANDIC GLACIAL", "THE MOUNTAIN VALLEY. 'smart water". "natural", "glacial" "clear". "mountain". 'spring", "minerals", "Mountains", "crisp", "clean taste". "100%", 'spring water" "renewable" "purest" "best-taste" "healthiest". "born better". "workout" "enhancer" "flavor". "#1" "mineral" "purified" "Thirst". "Purity", "Guaranteed". "Quality" "rises" "top". 'suffering", "pure", "fresh", "crestal clear", "earth", "loss". "healthy", "easiest" "profits". "refreshing" "walking". "no climate warming" "compostable" 'spring water", "clouds", "clean", "crisp taste". "Refresh", "Replenish", "Rehydrate", "Plant". "on top". "Pure", "naturally". "Recyclable", "less plastic" "easy" "30% less" 'smaller". "Pure", "Natural". "better for you", "better price". "Doesn't like", "impure". "sky diving" "boating" "balling", "Pure life" "Begin". "born better" "mountain spring water" "crisp" "clean taste".

Search Term: Bottled Water

"Think before you drink" "Natural" "Alpine spring" "100%" "difference". "100% natural spring water" "pure" "quality". "pure life" "begin now". "distil water", "glaceau", 'smart water", "electrolytes". "pure water" "pure taste". "Evian" "Fiji", "Aquafina" "Poland Spring" 'smart water". "pure life" "begin now". "pure life" "pure life" "should" 'stop" "bottled"

"water". 'sparkletts" "Fiji", "Voss" "Hinckley" "the mountain valley". 'sparkletts" "Fiji", "Voss" "Hinckley" "the mountain valley". "Evian" "LIFE WTR". "Dasani" "Poland Spring" "Deer Park", "Ozarka" "Crestal Geyser" "Dasani" "Nestle Pure Water" "Aquafina" 'smart water" 'spring water" "tap water". "vitamin water" "O water", "Penta" "Aqua". "Icelandic" "Evian" "Essentia", 'smart water" "Waiakea" "Fiji" "Penta" "Voss". The word choice is Neutral. "LIFE WTR". "Aqua Blue". "Hint" "colories" "100% natural spring water". "Core" "perfectly" "balanced" "hydration" "electrolyte" "minerals". "Icelandic" "Glacial". "Niaoaia""natural spring water". "buying" 'stop" "bottled" "water". "Bisleri" "Epure" "Nestle Pure life", "Gerolsteiner" "Lpellegrino" "evian" "Minalba" "Dasani" "Aquafina" "Aqua" . "Think before you drink" "Natural" "Alpine spring" "100%" "difference". "LIFE WTR". "ARROWHEAD". "Mount Franklin". "SVALBAR". "Open Water" 'sustainable" "plastic free" "ocean". "ASPEN PURE". "LeBleu". "Tesco" "apple" "raspberry" "Fearless", "Natural", "Mineral", 'spontaneous". "100% proceeds go to clean water for children" . "Core" "perfectly" "balanced" "hydration" "electrolyte" "minerals". "Mount Franklin". "bottled water" "less than". "really" "bottled" "water". "unbottled". "Natural's Spring". "100% proceeds go to clean water for children" . 'spring water", "electrolytes, "recycle", "natural", "Kentwood". "Dejablue". "Water for flint" "Donations". "Zephyrhills" "100% Natural" 'spring water". "O Pure" "New Zealand" "Artesian water". "good for the next generation" . "PEATS RIDGE PURE". "Just", "Water" "100% Spring water". "Planet" "Deep Artesian water". "EVA" "New Look" "Premium". "Eternal", "Natural" 'spring water". "BALANCE" "CLEANSE". "Aquafina" "Flavor Splash" "BALANCE" "Relax" "Women" "mind" "travel" "biodegradable" "Recyclable". "Danger" "bottled" "water" "Alternatives". "Niaoaia""natural spring water". 'stop". "bottled water", "best alternative" "plastic". "way better" "Green Sheep" "bottled water". "bottled water", "100% of contents intended for consumption", "61 gallons per year", "64 percent", "40 gallon" "natural disasters" "emergencies" "always there" "need". "Poland Spring" "Pure Quality" "100% natural spring water". "Fiji" "natural" "artesian" "minerals" "refreshing taste" "protected" "untouched" "finest" "recycle". "pure" "refreshment" "warning", "disclaimer", "bromate." "Oxigen" "oxygenated water". "no" "not" "reverse osmosis", "carbon filtration", "disinfection." "don't buy", "bottle of water". "Irish Spring water" "Pure". "Penta" . "Waiakea" "volcanic water". "toxic". "bottled plastic" "chemical" "toxicity", 'safe". "Kirkland" . "helping children get clean water".

Search Term: Eco-Friendly Bottled Water

"Icelandic" "Glacial". "return", "for free" "usps". "zero waste bottles" "Biota" "Dasani" "green planet" "renewal" "100% biodegradable", "natural spring" "good for your health and the earth". "Recyclable", "less plastic" "eco" "30% less". "Bleu". "top", "eco-friendly" "water bottles". "power", "rain forests" "in your hand". "Just", "Water" "100% Spring water". "Recyclable", "less plastic" "easy" "30% less" 'smaller". "H2O". "premium spring water" "bottle" "label" "plant" "tree", "planted" "bottle sold" 'spring water". "plant bottle", "planet", "footprint", "resource", "30%" "100% recyclable". "sport" "water bottles". "Fiji" "promise" "progress". "Castle rock water". "plant bottle", "planet", "footprint", "resource", "30%" "100% recyclable". "way better" "Green Sheep" "bottled water". "way better" "Green Sheep" "bottled water". "sip", "refill" "repeat" "eco-friendly "water bottles". "plant bottle", "difference", "30%" "100% recyclable". "Just", "Water" "100% Spring water". "Pura". "Home & Lounge". "Gennissy". "Vero". 'simply" "eco" "logical. 'say no", "plastic, "bottle" "eco-friendly". "green", "reduce" "carbon emission" "rainforest".

Search Term: Bottled Water Environment

"bottled water", "17000000 crude oil", "plastic water bottles", "1000 years", "2000x the amount of energy" "4000000000 pounds of waste" "38 harmful chemicals" "co2" "recycle". "bottled water", "environment". "10000 times ", "61 billion dollars", "53 billion gallons",

"plastic" "tap water". "energy", "plastic", "transportation" "manufacture". "40% of all bottled water is taken from municipal water source". "bottle water", "not safe" , "negative environmental impact" "500 times more". "Recyclable", "less plastic" "easy" "30% less" 'smaller". "50 billion plastic water bottles" "landfill". "oil" "bottled water". "disaster relief", "healthier" "bottled water", "Dead sperm whale", "1000 years", "aquatic species" "not recycled". "bottled water", "100% of contents intended for consumption", "61 gallons per year", "64 percent", "40 gallon" "natural disasters" "emergencies" "always there" "need". "plastic water bottle", "individual heath", "community health" "health of the environment". "bottled water", "2.7million tons", "2.1 million", "1.7 billion rand". Prevent "90%" "plastic bottles" "garbage". "stay hydrated". "oil" "bottled water" "convenience". "stop ", "bottled water", "costs" "recycled. "151billion liters of oil each year", "100 million plastic bottles", "80% end up in landfill", "500 years for plastic to degrade" "tap water". "bottled water", "waste", "recycling". "economic cost ", "environmental cost", "CO2", "oil". "bottled water", "2.7million tons", "2.1 million", "1.7 billion rand" "Recyclable", "less plastic" "eco" "30% less". "difference" "new" "1000 times the cost of tap water", "80% water bottles are not recycled", "1000 years for plastic to degrade" "tap water" "marine environment". "bottled water", "best alternative" "plastic". "grate taste", "less waste". "2.4 billion liters", "2000 times more energy", "270000 times the cost" "half of the plastic bottles sold in Ontario are not recycled" "plastic bottles don't really decompose" "join us" "take action". "23% of water bottles are recycled", "87% of water bottles end up in landfills", "1000 lbs. of recycled water bottles, 780 lbs. are recycled again, 220lbs go to landfills". "1.5", "50", "322" "38million plastic bottles", "landfill", "700 year" "decomposing". "70 Billion plastic bottles", "oil", "500 years to degrade" "killing". "40% of all bottled water is taken from municipal water source" "22% chemical contaminants". "plastic" "environment" "300 million metric tons of plastic", "35 billion plastic bottles end up in landfills", "choose pet" "environment", "bottles" "tap" "choose". "recyclable", "not recycled", "environmental impact" "7.5bn are recycled", "15000000 bottles dropped as litter landfilled", "clearing" "Transparent", "better", "environment" "Natural Alkaline spring water" "100% recyclable" "biodegradable". "1.5", "50", "322" "health", "bottled water", "tap water" "low quality" "huge environmental impact" "chemicals" "save", "recycling", "free"

APPENDIX C. VERBAL LIST FOR WORD TREE ANALYSIS

Search Term: Bottled water advertisement

Balance your body and soul. Drink pure live long. Not just the sparkle of life but an array of virtues. When it comes to the environment, we're doing less. 100% natural spring water deserves an Eco-Shape bottle that has less impact on the earth. Poland Spring natural spring water. A little natural does a lot of good. Stay healthy stay hydrated. Drink up, hydration is healthy. Up to 30% made from plants 100% recyclable plastic bottle. Enhanced with minerals for a pure fresh taste. Swill waters run deep so we go deep, deep, deep into the great plains water table to pipe this ancient, undisturbed water to your table. No raunchy reuse here, Ogallala water is guaranteed free of questionable recharged sources and serves up 30% less in every freshly-pumped bottle. 50% less in some areas. Supplies are limited. Your Fiji water purchase helps reduce carbon emissions and protect Fijian rainforests. To learn more, go to fijigreen.com. Made with at least 30% less plastic than the average half-liter bottle. Flexible and easy to grab, carry and crush for recycling. Features a label approximately one-third smaller than our previous label. Use an average of 30% less plastic. Untouched by man. Click to learn why our water is green. Fresh and pure. Aquafina is the perfect companion for happy bodies everywhere. This year, for the 1st time, Volvic launches its first renewable plant-based bottle. This greener bottled perfectly protects the volcanic natural mineral water inside. And is still 100% recyclable. Is 100% recyclable. Features a new label that's 30% smaller. Is made with 30% less plastic than the average half liter bottle. Easy to carry. Is flexible so it's easier to crush for recycling. We sell 'em as quickly as we fill 'em from the tap. If you start with something better, you get something better. We believe our water starts from a better place, natural springs. Hidden beneath the Earth, where the elements are just right' and minerals strike a unique balance-nature works in perfect harmony to create water crisp and refreshing enough to become a 100% natural nestle water regicnal spring water brand. Born better only from carefully selected natural springs. Refresh you in every drop. Going dry this January? Hit the bottle. Inspired by clouds for a clean, crisp taste. It's estimated that the total amount of energy embedded in our use of bottled water can be as high as the equivalent of filling a plastic bottle one quarter full with oil. Turn your tap and drink tap water. As a matter of fact, the water you drink does make a difference. Over one billion people around the world lack clean water. Join me in my partnership with ethos water and h2o Africa and make a difference in the world water crisis. Every time you buy a bottle of ethos, money goes to help provide children with the access to clean water they need. So if you choose to drink bottled water, please choose to make a difference. To lean more, visit ethoswater.com Ethos is a proud supporter of "running the Sahara" in theaters this spring. A donation of $0.05 is made for every bottle of ethos sold toward the ethos water fund goal of donation $10 million by 2010. Uplift yourself to your best anytime. Up to 30% made from plants 100% recyclable plastic bottle. Pure taste in a better bottle. Enhanced with minerals for a pure fresh taste. The only thing you taste in your water is water. Aquafina is purified water. It originates from public water sources and is then purified through a rigorous, seven-step purification process called hydro. Enjoy your summer vacation. The only water worth paying for. Mountain valley water is one water with no sodium, no additives, no artificial ingredients, no carbonation. It's one water which springs pure from the earth, untouched by pollution. It's one water which tastes the way real spring water is supposed to taste-for that's what it is. That's why mountain valley is the only water worth paying for. Bottled water is the most environmentally responsible consumer product in the world. Most water bottles are recycled. Earth protects Fiji and vice versa. Taking care of the planet is in our nature. Together with

conservation international, we are helping to preserve Fiji's largest lowland rainforest, the Sovi Basin. This primitive forest is habitat to plant and animal species not found anywhere else in the world. Forever protecting this biologically rich area also preserves Fiji's most precious resource-its natural environment. All of which makes Fiji water not just the best-tasting bottled water- but also an environmentally responsible choice. Nature meet nurture. An unforgettable experience. The pure crisp taste of DASANI now comes in a better bottle. Mae form up to 30% plant-based materials and still a 100% recyclable bottle, plantbottle packaging brings your fresh-tasting water in a bottle designed with the planet in mind. Available now in the Western U.S. Drawn from the braid Spring, County Antrim and bottled at source, the RIOBA range of premium glass bottled water is exclusively available at Makro. Available in 250ml and 750ml still and sparkling varieties, RIOBA waters offer elegance and quality at profit enhancing prices. Pure life begins now. Better for you, better price. Inspired by clouds for a clean crisp taste. Vapour distilled from British spring water. New sportsbottle with extra grip. Recent tests at several U.S Embassy residences revealed bacteria at elevated levels in the tap water. As a precautionary measure. The U.S. Embassy recommended to its staff to boil their drinking water or use bottled water. The U.S. Embassy will continue to monitor the situation and will provide updates accordingly. We at Western want you to be safe. Great prices on the highest quality spring water. Get your naya water today. Valpre Plant bottled a lighter footprint on the planet and its scarce resources. Up to 30% made from plants 100% recyclable bottle as ever. The workout water. Also try propel in new liquid enhancer and powder add flavor to your workout. Suck it up. Lak Mead refreshes to the last draw with its exclusive three straws. Go ahead, suck it up! No matter how low you go, the last drop flows as smoothly as the first. You deserve every las drop, dammit. 100% cumbrian Natural mineral Water. Nothing else. Refreshingly simple. Aqua Pura, nothing pura. Power couple. Vapor-distilled for purity, electrolytes for taste. Running mate. Vapor-distilled for purity, electrolytes for taste. The taste of paradise. From the island of Fiji. Pour weather? 2 hot? H20. Heat wave goodbye to thirst. Quenches even the thirstiest conditions. Born better. Isklar, which means 'ice clear' in Norwegian, is the first UK water brand imported from Norway. Research showed consumers were looking for alternatives to ubiquitous continental waters, and Isklar was created to fill the gap of 'everyday premium', delivering taste and style with sustainability. Inspired by the clouds. We took our cue from nature, then added electrolytes for a distinct taste. The result is pure and crisp, like from a cloud. Up to 30% plant-based 100% recyclable bottle. Redesigned plastic, recyclable as ever. Take me to the water. Fashionably Thinner. The eco-shape bottled with 15% less plastic. We can all make a difference. Despite the snowcapped mountains in its logo, AQUAFINA is filtered tap water. That's actually good news, because tap water is subject to much stricter regulations than bottled water. It wasn't until 2007 that PepsiCo bowed to pressure from consumer groups and added the phrase "public water source" to its label. Norwegian glacial natural mineral water. Wonder Spring mineral water from the Swiss Alps. Captured at a high altitude, in the heart of the mountains. Contains naturally occurring minerals for a crisp, clean taste. Also try propel in new liquid enhancer and powder. Add flavor to your workout. Now the #1 mineral and purified water brand in the Philippines. Purity Guaranteed. Quality always rises to the top. Arctic suffering earth's loss is your pure, fresh, crystal-clear gain. A beverage you can bank on. Almost everything grows with a little extra water – and with a margin as healthy as Nestle Pure life bottled water, this might be the easiest add0on you've got. If you would like Nestle water to help grow your profits, remember: Just add water. Belu is the first bottled first bottled water that doesn't contribute to climate change. The UK's first COMPOSTABLE bottle made from corn. All our profits go to clean water projects. Every bottle you drink gives someone clean water for a mouth. Refresh replenish rehydrate. Be on top of your game. This print advertisement for Fiji Water highlights the incredible natural beauty of Fiji, from where

the water is drawn, and proclaims it as paradise. This technique can make people believe that if they purchase the product: Fiji Water, then they too will be taken to this amazing destination. This advert will probably appeal to adults, in particular those with hectic everyday lives that they want to escape from. Is 100% recyclable. Features a new label that's 30% smaller. Is made with 30% less plastic than the average half liter bottle. Easy to carry. Is flexible so it's easier to crush for recycling. Discover your oasis. Pure natural water. Better for your better price. Doesn't like to mix around much. Especially with the impure kind. Pure life begins now. Born better. Arrowhead Brand 100% Mountain Spring water is sourced only from carefully selected mountain springs, and contains naturally occurring minerals for a crisp, clean taste.

Search Term: Bottled water campaign

Infinity water systems "A superb simple installation for an extremely cost effective bottled water system". 98% melted ice caps. 2% polar bear tears. If bottled water companies can lie, we can too. Find out the truth at tappening.com or spread your won lie at startalie.com. 240 times more expensive than tap water. Buy a reusable water bottle from www.wewanttap.com. Tapping into a successful reusable water bottle campaign. Bring your own bottle. It's time to start. There's only one chance. Stop wasting earth's resources. You own a tap, water is water. Environmental impact. Plastic water bottle manufacturers produce more than 2.5 million tons of carbon dioxide each year. Help reduce Global Warming & your carbon foot print. Turn your tap & drink tap water. Think before your drink. On average, only 10% of water bottles are actually recycled. The other 90% wind up in the landfill or littering the environment… That really piles up! Drink smarter. Singaporeans spend about $98 million buying single-use bottled water each year, consumed about 64 million liters of bottled water. Going dry this January? Hit the bottle. Inspired by clouds for a clean, crisp taste. Think outside the bottle. 3% of earth's water is fresh water. A simple illustration describes the concept. Bottled water costs 7000 times more than the same water that comes from a faucet. Drink tap. Tappening.com. Pure life begins now. find your volcano. Natural mineral water. Find your Volcano. How well do you know your water? 2.7 million tons of plastic are used to bottle water each year. Drink responsibly get on tap. Quench thyself save thy planet. Impress your friends with tap's re-usable water bottle. The bad news is we've run out of tap bottles for now. But the good news is we're working on a new improved bottle for 2009. It's more than hydration, its total electrolytenment. Water that sustains your well being. That's eletrolytement. Why you must avoid bottled water. Price of bottled water is up to 1000 times the cost of tap water. 768.1 million units of bottled water were consumed in the UAE in 2015. UAE has one of the highest consumption of bottled water per capita in the world. It takes 3 litres of water and half a litre of oil to produce a 1 litre plastic bottle. It can take up to 1000 years for plastic water bottles to degrade. 80% of water bottles are not recycled. 54% of the 120 marine mammal species on the threatened list have been observed entangled in or ingesting plastic. In march 2016, 13 sperm whales were stranded on Germany's costs with their stomach full of plastic. Reduce your plastic footprint. Bottle water is rubbish. Bottled water makes acid rain fall on playgrounds. Bottled water causes blindness in puppies. 5% back to water project. Stop, think before you buy it. 50% of bottled water = tap bottled water = expensive = waste. Get a reusable bottle and enjoy free water from hydration station. Tap water is, on average, 500 times cheaper than bottled water. Boycott the bottle. 64 percent of bottled water comes from tap water sources. Bottled water is up to 2000x more expensive than tap water. bottled water quality reports aren't mandated like for tap water. 4 billion pounds of plastic used in water bottles in 2016. By 2050 there may be more pounds of plastic in oceans than fish. 12.8 billion gallons of bottled water sold in 2016. 70 percent of plastic water bottles not recycled in '15. Americans drank an average of 40 gallons of bottled water in 2016. Microorganisms can be worse in bottled water. The average American consumes

160 plastic water bottles per year. Or you could use just one. Price of bottled water is up to 1000 times the cost of tap water. Plastic. Releases toxins and chemicals in our water that impacts our health and our life. It can take up to 1000 years for plastic water bottle to degrade. 80% of water bottles re not recycled. Winner of the white pencil at d&ad impact 2016, new York. Form the producers of who killed the electric car? And I.o.U.S.A. tapped is another example of film's potential to inspire. This is a passionate documentary, well-executed from engaging and intelligent voices who will inform and entertain you with their movies. Say no to single use. Sign the petition at messageinabottle.org.uk. The most complete water-bottle filtration system on earth. Can't live without it? This product may contain bromate at a level that exceeds legal standards because of a high level of bromide which is formed during the ozonization process. At home and on the go. These water bottles can go anywhere with you. Such as in the car or while you are working out. Safe and stylish. Stainless steel water bottles eliminate the dangers posed by their plastic counterparts and provide a great method of water storage. Supplies are limited? Once you supply of water runs out, there's no need to find a trash can. Take it home and refill it for a fraction of the cost of a new plastic bottle. We're drowning in plastic. Drink tapwater. Filtered fresh. Why bottled water? I'd tap that. Inspired by clouds for a clean crisp taste. Vapour distilled from British spring water. How Gatorade does water. Bottled water free UBC. A campaign for water alternatives. Bottled water makes acid rain fall on playgrounds. If bottled water companies can lie, we can too. Find out the truth at tappening.com or spread your own lie at startlie.com. Ban the bottle. Bottled water free zone. The pro anti-water bottle society. Don't be naïve, drink bottled water. when you buy a 16 oz water bottle a vending machine for $1.25, you paying a colossal $10.00 a gallon!! This means you are paying 3 times more for water than gasoline. Vapour distilled water with added electrolytes. Bottled water free day. Say no to bottled water. ready for a downpour? Spring distilled. Vapour distilled spring water for a clean, crisp taste. Stay hydrated. This summer with nestle pure life the recommended daily intake of water for adults varies between 2-2.5Ltres, have you had enough today? Ask for natural. Natural water from our land. Masafi is the only UAE brand of wate that doesn't come from the sea. Take back the tap. Pledge not to drink bottled water where tap water is available. Take the pledge. Refills, not landfills. 2.7 million tons of plastic are used to bottle water each year. ¼ of all bottled water is simply filtered tap water. Bottled water is the #1 packaged beverage because you choose healthy. Stay healthy. Stay hydrated. Bottled water matters. Ready to be served? 12M tons of plastic enters the ocean every year. Plastic bottles make up a third of all plastic pollution in the sea. Get involved join the plastic free challenge. Reduce plastic bottles consumption, use refillable gallons instead. The bottled water industry causes a severe strain on the environment, with a production process heavily dependent on fossil fuels. You may serve water at the table using a fancy pitcher or a glass bottle that you can decorate yourself. Just say no to bottled water. The real heroes of dry January. Helping children get clean water. Natural spring water. Coca-Cola's Dasani is really overpriced tap water. Dasani is da phony! It's Coca-Cola crap. You're better off with water from any public tap! Makes you stronger. Applies to 3.1 million children under five who die each year from malnutrition. 100% premium kitchen-grade stainless steel. Secure air-seal locks water inside. 100% FDA/LFGB approved food-grade silicone. Unique spiral design creates stunning looks. The size collapses into a tiny cube. Bring home convenience. Better, pure and simple. Water from heaven. Tap into it. The deadly facts about water. Water can be chemically synthesized by burning rocket fuel. Water is one of the primary ingredients in herbicides and pesticides. Over consumption can cause excessive sweating, urination, and even death. Water is the leading cause of drowning. 100% of all serial killers, papists and drug dealers have admitted to drinking water. 100 percent of all people exposed to water will die.

The adjustable dial lets you easily change the amount of flavoring in each sip, from 0-100. Cirkul's flavor cartridges are perfectly portable, easy to toss in your bag. One flavor cartridge is equal to four bottles of your favorite beverage, saving you both trips to the grocery store and pantry space. Cirkul bottles are dishwasher safe and leak-proof. And because they only contain water, there's never residual flavor lingering around. Take back the tap. As a matter of fact, the water you drink does make a difference. 2.1 million plastic bottles thrown out annually by con u. Three litres of water produce one litre of bottled water. 25 per cent of the world's fresh water is in Canada. 1000 years for a water bottle to break down in the trash. 0.01 of CON U's plastic bottles end up in recycling. A perfect blend of minerals to keep you fresh. The ultra clean and smooth taste of culligan water is made with formulating a perfect blend of calcium, magnesium, potassium and sodium. Hence, it helps you in weight management, aids digestion and promotes healthy skin. Only 1 out of every 5 water bottles is recycled. The other 4 contribute to the 3 billion pounds of waste each year from plastic water bottles. Brought you by chargers for sustainability. Take charge go green. American decided for the candidate who stopped drinking bottled water. Congratulations president-elect Obama. Thanks for adopting our tap water pledge. President -elect Obama. Now, take it a step further and ban bottled water in the White house. Clean water campaign. The perfect gift for your love. Its precious. It' really previous. Impress your clients with corporate gifts. Ideal for seminars & product launches. Selling water as drank by millions of kids around the world. We are Fiji natural artesian water. Unicef selling water as drank by millions of kids around the world. Pour weather summer distilled. Heat wave goodbye to thirst. I drink tap water. You can't put a price on water. a campaign that increased the value of water by removing the price altogether. Our single serving pet bottles of 0.5 & 1.5 liters are perfect for the people who are always on the go. Whether at gym, at work or at college, these bottles are convenient and full of culligan's freshness and pure goodness. Evening standard campaign water on tap. Why is it important? The annual fuel used to transport bottled water (around 2.7 billion litres) can power 1 million vehicles for a year. 100,000 animals die every year because of plastic waste that isn't disposed of properly. Pure enjoyment. Fresh and pure, Aquafina is the perfect companion for happy bodies everywhere. The global annual amount of plastic used to produce water and carbonated water bottles. Most of this plastic ends up in landfills. The estimated market value of south Africa's bottled water market. This figure is expected to increase at a staggering rate. About 40 percent of all bottled water starts as tap water, to which minerals and other chemicals and flavoring are added. The bottled water industry has less stringent testing policies than governmental agencies which require rigorous testing of tap water. The equivalent number of vuvuzelas one could create with the amount of plastic used to produce water and carbonated water bottles. Each bottle requires nearly 5 times its volume in water to manufacture and there is no evidence that bottled water is healthier than tap water. The global annual amount of carbonated bottled water consumed outside its country of origin. This results in massive transportation and environmental damage. 77 percent of bottles in south Africa are not recycled and end up in landfills sites. Students are ready to make a change. Drink water responsibly. Bottled water is rubbish. If water and soda cost the same, your water bill would be 10,000% higher. May create feelings of consumer reassessment. Does not cause drowsiness or sense of financial exploitation. Likely to reduce production of harmful, superfluous plastic. Excellent source of environmental goodness. It has failed its consumer by extorting money from them based on unvalidated claims. It has perpetuated famine and disease within the country from which it source its products with little or no remorse. It continues to create unnecessary waster and greenhouse gases that could be avoided if people drank tap water. Fiji water supports a public policy that could detrimental to the public access of potable water. Plastic water bottles may contain a number of dangerous chemicals such DEHA which is a potential carcinogen and phthalates which are

endocrine disrupters. The US Food and Drug Administration has stricter rules for tap water than for bottled water and most bottled water is not required to be filtered, disinfected, or tested. Bottling water can release more than 2.5 million tons of CO_2 into the environment and can use around 1.5 million barrels of oil per year. Our use of plastic bottles is contributing to the million of CO_2 emissions released each year and adding to our campus's carbon footprint. The majority of plastic waste ends up in landfills, waterways, and oceans and only 25% of plastic waste is recycled. There is a large patch of wasted called the great pacific garbage patch approximately the size of Texas in the Pacific Ocean. Plastic bottles in landfills can take between 450 and 1000 years to biodegrade. For earth day, the market place has agreed to cease selling plastic water bottles for the duration of the day. As an alterative the public healthy club will be selling reusable 25oz stainless steel water bottles at the earth week quad fair and all day earth day. Tap in drink outside the bottle. Bottled water is an unnecessary product: we just don't need it," said SENSSA president Manuel Chavez-Ortiz. "Water is and should be a free product". Only 1 in 5 water bottles are recycled. Water without waste take the pledge. Tell Acadia: go bottled water free. The price of one month of drinking water. At around a penny per gallon from the tap, the cost of drinking the doctor-recommended 8 glasses of water daily for one month is just 15c. The same amount of bottled water can cost up to $116 per month. How much does it cost to drink 2L of water every day for a year? Taking care of the planet is in our nature. Together with conservation international, we are helping to preserve Fiji's largest lowland rainforest, the Sovi Basin. This primitive forest forest is habitat to plant and animal species not found anywhere else in the world. Forever protecting this biologically rich area also preserves Fiji's most precious resource-its natural environment. All of which make FIJI Water not just the best-tasting bottled water -but also an environmentally responsible choice. Nature meets nurture. Bottled water free UBC, a campaign for water alternatives. Just add water to our reusable bottles at our filtered fill station in the courtyard. We've ditched the plastic water bottles this way you can too. 2.00 from every purchase goes to the Michigan clean water campaign. Learn more at Michigancleanwater.org. For happy bodies. Fresh and pure, Aquafina is the perfect companion for happy bodies everywhere. Aquafina is a proud supporter of the drink up campaign.

Search Term: Bottled water

 Think before you drink. Crystal geyser natural alpine spring water. Why you should stop buying bottled water. 6 reasons to stop buying bottled water. These samples were picked up from US, China, Brazil, India, Indonesia, Mexico, Lebanon, Kenya and Thailand. Bottled at the source. Sustainable packaging for plastic-free oceans. What's really in that bottled water? Water for flint. 5 dangers of drinking bottled water (& 7 healthier alternatives). The best alternatives to plastic water bottles. 8 things you need to know about bottled water in California. All bottled water used in 1 year in California equals: 98 minutes of all municipal water used in falifornia in 1 year. Bottled water is a very small water user bottled water uses only 0.02% of all water in California. 100% of all bottled water companies in CA are subject to all CA regulations. Most bottled water produced in California, is consumed in California. In times of natural disasters & emergencies, bottled water is always there when you need it. In Fiji, fainfall slowly filters through volcanic rock, adding the vital minerals that give FIJI Water its unique and refreshing taste. The water collects in an active ancient artesian aquifer deep within the earth, where it is protected from external elements. IT's the way nature intended water to be. No, bottled water is not treated with reverse osmosis carbon filtration, or UV disinfection technologies. Don't buy another bottled of water until you read this. Bottled Plastic chemical water for human consumption. Toxicity tests prove that it's safe to drink?

Search Term: Bottled water environment

The lands department and environment and climate change committee would like to hear your thoughts on your use of bottled water. This survey will help us understand the community's dependence on bottled water and addresses the waste created as a result and our recycling practices. It takes 3x the amount of water to produce one bottle of water. 5 ounces CO@ produced for every 1 ounce of PET ¼ bottle full of oil is used to fill, transport, cool, and dispose of 1 bottle. 30 % less plastic than other brands which means it's easier on the environment. New grip and lighter packaging is easier to hold. Holds the dame amount of water with less plastic. You get the pure, refreshing taste of nestle pure life. And the world gets less plastic. True to the environment and true to how you live your life. Let's all make a difference. Please recycle. Available soon at a retailer near you. Plastic pollution: one of the greatest burdens to the environment. Enough plastic is discarded every year to circle the globe 4 times. It is estimated that 50 per cent of the plastic on this planet is used only once before being thrown away. The UAE is among the highest per capita consumers of bottled water in the world. 80% of water bottles are not recycled. Price of bottled water is up to 1.00 times the cost of tap water. Almost no bottle caps are recycled because they are made from different types of plastic. It can take 1000 years for plastics to degrade. 54% of the 120 marine mammal species on the threatened list are subject to harm by plastic, either becoming entangled in it or swallowing it. Plastic in the ocean breaks down into smaller particles that affect the marine environment. In march this year, 13 sperm whales were stranded on the German coast with their stomach full of plastic and other scrap. Bottled water in "plastic" made from cornstarch which biodegrades. Sold at wild Oats stores for $ 1.79. The UK's plastic bottle habit 13 billion plastic bottles sold every year. 15,000,000 bottles dropped as litter, landfilled or incinerated every day. 233000 tonnes of co2 produced from landfill or incineration. 778m was spent on clearing plastic litter and enforcing laws in 2015-16. Branding that is completely transparent. Better for your body. Better for the environment. 17000000 barrels of crude oil used annually to make plastic water bottles. 1000 number of years it can take for a plastic water bottle to decompose. It takes 2000x the amount of energy to produce bottled water than the equivalent amount of tap water. 48.7% of bottled water that is actually water. 4000000000 pounds of waste annually from plastic bottles. It takes 3 times the amount of water to produce the bottles as it does to fill it. Harmful chemicals found in bottled water. Weight of a 5 gallon water bottle. Only 1 out of 5 plastic water bottle are recycled. 40% of all bottled water is taken from tap water, filtered and bottled. 22% of bottled water contains chemicals that exceed state regulations. 100% the amount of bottled water can be sold without reaching tap water standards. 17 Million barrels of oil are used to create water bottles each year. It takes the equivalent of 3 bottles of water to create 1 bottle. 3 billion pounds of waste, each year, is produced by plastic water bottle that are not recycled properly. Only 1 in 5 water bottles is actually recycled. The rest go into landfills. The amount of water distribution companies that must submit a report on their water standards. The price of bottled water is up to 10000 times the cost of tap water. annually, Americans consume 8.6 billion gallons of bottled water. Which generates $61 billion dollars. Energy required to make bottled water. 40% of all bottled water is taken from municipal water source. Is 100% recyclable. Features a new label that's 30% smaller. Is made with 30% less plastic than the average half liter bottle. Easy to carry. Is flexible so it's easier to crush for recycling. Americans used 50 billion plastic water bottles last year. 40 billion ended up in landfills. 80% of water bottles are not recycled. Because they are made from a different type of plastic, almost all water bottle caps are not recycled. In a recent study, 92% of the dead seabirds found in the test are had ingested plastic up to 5% of their total body weight. It can take up to 1000 years for plastic water bottles to bio-degrade. During this process, plastic releases toxins and micro-plastics that impact aquatic species, which impacts us. In 2008, a dead sperm whale in California had ingested over 450lbs of plastic and objects. You can help prevent

this. . Plastic water bottles may contain a number of dangerous chemicals such DEHA which is a potential carcinogen and phthalates which are endocrine disrupters. The US Food and Drug Administration has stricter rules for tap water than for bottled water and most bottled water is not required to be filtered, disinfected, or tested. Bottling water can release more than 2.5 million tons of CO_2 into the environment and can use around 1.5 million barrels of oil per year. Our use of plastic bottles is contributing to the million of CO_2 emissions released each year and adding to our campus's carbon footprint. The majority of plastic waste ends up in landfills, waterways, and oceans and only 25% of plastic waste is recycled. There is a large patch of wasted called the great pacific garbage patch approximately the size of Texas in the Pacific Ocean. Plastic bottles in landfills can take between 450 and 1000 years to biodegrade. For earth day, the market place has agreed to cease selling plastic water bottles for the duration of the day. As an alterative the public healthy club will be selling reusable 25oz stainless steel water bottles at the earth week quad fair and all day earth day. . The estimated market value of south Africa's bottled water market. This figure is expected to increase at a staggering rate. About 40 percent of all bottled water starts as tap water, to which minerals and other chemicals and flavoring are added. The bottled water industry has less stringent testing policies than governmental agencies which require rigorous testing of tap water. The equivalent number of vuvuzelas one could create with the amount of plastic used to produce water and carbonated water bottles. Each bottle requires nearly 5 times its volume in water to manufacture and there is no evidence that bottled water is healthier than tap water. The global annual amount of carbonated bottled water consumed outside its country of origin. This results in massive transportation and environmental damage. 77 percent of bottles in south Africa are not recycled and end up in landfills sites. Form which 90% of plastic bottles, end up as garbage. To produce one empty plastic bottle, seven bottles of water and 1/3 bottle of oil are needed. And the process continues. Is it worth it? Why you should stop drinking bottled water. Bottled water is healthy water-or so marketers would have us believe. Just look at the bottled water labels or ads; dee[. Pristine pools of spring water; majestic alpine Peaks…in reality bottled water is just water; however, that fact isn't stopping people from buying a lot of it. Here are some solid stop drinking reasons to kick the bottled water habit. In the U.S bottled water costs between $0.25 and $2 per bottle while tap water costs less than $0.01. U.S. drinks 21 gallon of bottled water per capita per year. Plastic bottle production uses 151 billion litres of oil each year. Around 40% of bottled water is filtered tap water. it takes 3 litres of water to make 1 plastic bottle. 2.5 million tones of carbon dioxide produced in manufacturing plastic bottles each year. 100 million plastic bottles used world wide every day. 80-% end up in landfill or the ocean. Environmental organizations list plastic as the number one threat to our marine environment. 500 years for plastic to degrade. Th best alternatives to plastic water bottles. Learn more: find out how you can get involved at. Refills, not landfills: take back the tap and use refillable water bottles instead of bottled water. Put a price on plastic waste by supporting a deposit return program for plastic bottles in Ontario. The problem with bottled water a few facts. Only about 13% of water bottles are recycled. 87% of water bottles end up in landfills. For every 100lbs of recycled water bottles, 780lbs are recycled again and 220lbs got o landfills. 38 million plastic bottles go into land fill every day. A plastic bottle can take up to 700 years to begin decomposing. What impact does drinking bottled water have on the environment? Over 70 billion single use plastic water bottles are consumed annually in the US and Europe alone. For every 1 litre of bottled water in your local supermarket, 2 litre have been used to make and ship it to you. Fill up your bottled with oil to a fifth of its capacity to witness how much oil is used in manufacturing the bottle and shipping it to you. By consuming bottle water you are contributing to killing over 1 million sea bird and 10000 mammals annually, who die by ingesting or becoming trapped in plastic waste. Unless it has been incinerated, every piece of

plastic ever made still exists; reason? Plastic takes over 500 years to degrade. Bottled water is commonly more expensive than petrol or diesel. Help reduce plastic waste and preserve natural resources by using a water-to-go reusable bottle and filter/ Get the taste and convenience of bottled water at a fraction of the costs, where you are certain of quality by filtering it yourself. 40% of all bottled water is taken from municipal water sources. 22% of tested bottled water contained chemical contaminants at levels above strict state health limits. Plastics in the environment. Drink culligan, think sustainability. Over 87 billion gallons of bottled water is consumed globally. About 300 million metric tons of plastic are produced worldwide annually. 50% of the plastic is discarded within a year of their purchase. 50% of the American population drinks bottled water regularly. Around 35 billion plastic bottles end up in landfills in the U.S. every year. 1 five gallon bottle can hold water equal to that of 40 small single-serve bottles. Five gallon bottles can be replaced and reused by culligan, unlike single-serve bottles. Five gallon PET bottles are BPA-free and more durable than single-serve bottles. Choose PET over polycarbonate bottles. Choose PET five gallon bottles over single-serve disposable bottles. Use reverse osmosis filters and bottle-free coolers. Carry your own water bottle and refill as you go. What the environment looks like on the bottle. What the bottles looks like in the environment. This summer, choose tap. A healthier solution or more waste for the environment. Re-think your drink packaging and always recycle. Did you know almost 70% of what people drink these days comes in a package? Nearly all drink containers are easily recyclable, yet 10 million tons were not recycled last year. And despite what some people hear about bottled water container filling up landfills, PET bottled water containers make up only a small percent of all drink packaging that isn't recycled. Here's look at the eight most common drink packages. The social and material life of bottled water. Bottled water consumption over the last three decades, per person. One of the factors that contribute to the consumption of the bottled water is the apparent lower quality of tap water's organoleptic. Does tap water really smell and taste better, and is it healthier? Is mineral-rich water traditionally considered as food for health? Mineral composition varies greatly across regions and brands there are concerns about the quantities of certain harmful minerals such as arsenic, lead and copper. Production of plastic water bottles results in huge environmental impact. Of the estimated 30 million water bottles sold in the United States, 86% become waste that holds the potential to impact the environment because of the long duration of its degradation process. Bottles' plastic might be a source of potentially dangerous chemicals. Free recycling collection containers for Chula Vista Businesses. Want to save your business money while helping the environment? Let us help you do just that for free. We'll provide business in chula vista with recycling collection containers, signage, posters and brochures, employee education. Complete the online application at chulavistaca.gov/clean.
Search Term: Eco-friendly bottled water
After you're done return it to us for free via any usps mailbox. Return to nature, 100% biodegradable natural spring water, good for your health and the earth. Made with at least 30% less plastic than the average half-liter bottle. Flexible and easy to grab, carry and crush for recycling. Features a label approximately one-their smaller than our previous label. Top 5 eco-friendly water bottles. The power of a rainforest in the palm of your hand. Is 100 % recyclable. Features a new label that's 30% smaller is made with 30% less plastic than the average half liter bottle easy to carry. Is flexible so it's easier to crush for recycling. Up to 30% made from plants 100% recyclable bottle as ever. Valpre PlantBottle a lighter footprint on the planet and its scarce resources. Up to 30% made from plants 100% recyclable bottles as ever. Sip, refil, Repeat, eco-friendly water bottles. Designed to make a difference. Plantbottle, up to 30% made from plants still a 100% recyclable bottle. Cardenas real estate says no to plastic water bottles and you can too.