

The Dynamic Interplay of Social Structure and Public Agency
in Environmental Public Participation: A Case Study in Tacoma, Washington

by

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ABSTRACT

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In theory, public participation is a critical aspect of ensuring the quality and democratic nature of environmental policy decisions. In practice, public participation is sometimes merely a regulatory hurdle that does little to influence the projects in question. The question then is how to improve public participation by better understanding the dynamic relationship between participants and institutions. This thesis is a case study of a public participation process concerning a proposed methanol refinery in Tacoma, Washington. Using an Environmental Public Participation (EPP) structuration theory model, this research asks two questions. First, did the structures of public decision-making in that situation influence the nature of public participation and, if so, in what ways? Secondly, did the agency exerted by participants change the structure and design of public decision-making? The research methods used were interviews and qualitative content analysis. It was found that public agency influenced structure and the structures of society influenced agency. Agency influenced structure in four ways: (1) participation encouraged the Port of Tacoma to have a new transparency plan that was multifaceted; (2) participation created a new norm in Tacoma that public participation was expected; (3) the participation made public institutions become more attuned to social media; and (4) agency made the environmental review process more complex for the project. Structure also influenced actors' participation in multiple ways: (1) the structures reinforced classical power relations in which structure is more powerful than agency; and (2) generally, the structures of society limited the scope of public participation. In short, it was found that structure and agency had a recursive relationship with one influencing the other. Structuration theory was a useful lens for understanding how these two interact with one another.

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Introduction

On January 21st, 2016 in Tacoma, Washington, speakers, one after the other, for six hours, approached the microphone to give their opinions on an environmental review. This conversation was long overdue, and the pent-up frustrations of the people of Tacoma overflowed. In record numbers, the citizens of Tacoma had turned out to debate a proposed 2.5-billion-dollar methanol refinery that was to be constructed at the Port of Tacoma. The citizens present were giving input on what the environmental impact statement (EIS) for the plant should include (City of Tacoma, 2016). Many individuals spoke to this theme, but there were a variety of other ideas that ran through the comments. People also spoke to the question of "participation." Many individuals said they felt excluded from the decision-making process; they felt unheard. With anger, they spoke about how the Tacoma Port Commission had already signed a lease with the company that hoped to construct the plant, Northwest Innovations Works (NWIW). In short, they felt that their participation was meaningless and the outcome was predetermined.

In theory, public participation is a critical aspect of ensuring the quality and democratic nature of environmental policy decisions. The potential benefits are many. Public participation can empower and educate local populations. Participants as a result can adopt environmental identities and behaviors. As local voices are being heard, it can lead to local knowledge being included in decisions thereby improving the quality of those decisions. In addition, public participation can reconcile different, potentially contentious viewpoints. In short, public participation has the potential to create a more

democratic and just process. Sometimes these ideals are able to be implemented in practice, but not always.

In practice, public participation is sometimes merely a regulatory hurdle that does little to influence the projects or decisions in question. Institutions that organize public participation such as cities, states, and other non-governmental organizations have found that even the best-intentioned processes can lead to the public being disillusioned. Even those agencies that are striving to implement the ideals mentioned in the last paragraph can struggle to do so in practice (De Santo, 2016). Research has found that participatory processes can unintentionally exclude large portions of the population and lead to litigation against the institutions that organize the process (Shepherd & Bowler, 1997). In looking at the above criticisms, one option is to conclude that public participation should not be encouraged by institutions, yet given the before mentioned potential benefits of public participation this does not seem like a viable option. The question then is how to improve public participation.

This question has been at the heart of much research (De Santo, 2016; Doelle & Sinclair, 2006; Glucker, Driessen, Kolhoff & Runhaar, 2013; Kurian & Munshia, 2016) and has created the subfield of Environmental Public Participation (EPP). EPP explores both practical and conceptual questions around public participation in the context of environmental decisions. In the United States, a large portion of this subfield studies public participation in the environmental review processes that have been mandated as part of the National Environmental Policy Act (NEPA) and various State Environmental Policy Acts (SEPA).

One common approach in the EPP field is to focus on the institutions and their policies that organize public participation. As part of this approach, the field often then generates a list of best-practices to be followed by these institutions. While this approach does have merit and is not the only approach taken in the literature, the irony is that this approach tends to subtly exclude the participants. Norton (2007) suggests that a structuration theory lens may help return the participant to the study of public participation. In order to address the broader concerns around public participation and the particular challenge of focusing on institutions, this case study analyzes a SEPA review of a methanol refinery in Tacoma, Washington using an EPP structuration theory lens.

Structuration theory is associated with the sociologist Anthony Giddens (1984). Structuration theory seeks to harmonize the relationship between structure and agency. This theory seeks to explore how structure influences agency and how agency influences structure. Agency is commonly thought of as the choices or actions of individuals or communities. Structure is loosely defined in a variety of terms and is associated with social facts, forces, norms or policies (Tan, 2016). In the social sciences, there is a common debate about what is more powerful — structure or agency. Structuration theory tries to overcome this dichotomy by proposing that they reinforce one another.

Environmental communications specialist Todd Norton (2007) has suggested that structuration theory may be a useful way to explore EPP. His reasons were both academic and practical. He said, academically, “a structuration model of Environmental Public Participation (EPP) provides a means to draw together extant literature,” and practically, it would “interrogate the critical organizing dimensions of this field of practice” (p. 147).

In order to apply this lens to the case study, my research questions ask did agency influence the decision-making structure, if so how, and did the structures influence the agency of actors in the environmental public participation process and, if so, how? It was found that structure influenced agency and agency influenced structure. Agency created a new norm around public participation, changed policies in Tacoma, and added extra layers of structure to the environmental review process. Structures generally limited the power and scope of the participants. In general, my findings reinforce the idea that public agency can make changes to structure, but within limits. An EPP structuration lens was found to be useful as it allowed my research to explore actors, institutions, and structures in a dynamic fashion.

The rest of this thesis will describe in detail my research. The background section describes the SEPA process and the Tacoma methanol refinery. The literature review looks at the relationship between the current literature on environmental public participation and my own work. The methods section describes the qualitative tools that were used such as interviews and qualitative content analysis. My results and discussion section describes how the structures of society did influence public agency and agency influenced structure. Agency influenced structure in four ways: (1) the participation encouraged the Port of Tacoma to have a new transparency plan that was multifaceted; (2) the participation created a new norm in Tacoma that public participation was expected; (3) the participation of citizens made public institutions become more attuned to social media, opening up new avenues for participation; and (4) agency resulted in the creation of additional structures and complexity in the environmental review process for the project. Structure also influenced actors' participation in multiple ways: (1) the

structures reinforced classical power relations in which structure is more powerful than agency; and (2) the structures of society limited the scope of public participation to the narrow focus of the environmental review. Structuration theory was a useful lens for understanding public participation and how structure and agency interact with one another.

Background

The Tacoma Gas-to-Methanol Conversion Refinery

The methanol refinery was proposed by a company called Northwest Innovations Works (NWIW). NWIW is a consortium of British Petroleum (BP), the Chinese Academy of Sciences (CASH), and the investment firm H&Q Asia Pacific (Zeman, 2015). NWIW has proposed to build three different methanol refineries across Oregon and Washington in St. Helens, Kalama, and Tacoma. The plants are worth an estimated seven billion dollars.

The science behind conversion of natural gas into methanol is well understood. Methanol is produced when natural gas (methane) is combined with steam and a variety of chemicals. Natural gas is a relatively affordable resource and methanol is a versatile product. Methanol is used as a feedstock for an abundance of products such as plastics. Large scale methanol production requires a large amount of energy and water due to the need to convert water into steam (Da Silva, 2016). Different possible routes, and methods for this process have been studied (Da Silva, 2016; Sunny, 2016; Wilhelm, Simbeck, Karp & Dickenson, 2001). Previously, the price of natural gas in the United States was too high for methanol production to be economically viable. That is changing now, as the United States has an abundance of natural gas, which is the stock from which methanol is made. Methanol production is expected to increase by 26% by 2020 (Virgin, 2014).

Informal news sources have documented the economic and environmental motivations for the plant. NWIW, port officials, and Governor Jay Inslee declared support for the project because they believed it would be an environmental benefit to the

world and local community. Jay Inslee went on record saying it is "one of the most innovative clean-energy manufacturing projects in the nation" (Zamen, 2015). The NWIW public website states that "replacing oil and coal-based methanol with methanol made from natural gas to produce olefins reduces carbon dioxide emissions by as much as 70 percent" (Northwest Innovations Works homepage, n.d., para. 1). In contrast, many citizens and a group called Redline Tacoma raised concerns over the refinery. Among many other concerns, they have commented on the water usage, electricity usage, safety, and end production of plastic (Martin, 2016).

Decision makers were motivated by the economic growth that could occur at the port (Zamen, 2015). According to a document produced by NWIW, the project would create 260 jobs during operation and 1,000 jobs for two years during construction (NWIW homepage, 2016). NWIW also said the plant in Tacoma would "by far be the largest taxpayer in the county" (Perine, 2016). According to port officials, it is an ideal location for the plant. In a promotional video for the plant, the Tacoma mayor said "we're talking about a thousand-plus family-wage jobs in Tacoma" (Nunnally, 2016).

Though proposed by a private corporation, the methanol refinery would have required multiple permits from the state of Washington. The requirement of state-issued permits meant that the refinery was subject to review under the SEPA.

SEPA and Participation

In 1970, President Nixon signed into law the National Environmental Policy Act (NEPA). This act became known as the “Magna Carta” of all environmental laws (Council on Environmental Quality, 2007). One of the largest influences of the NEPA is that federal agencies are required to have an environmental assessment (EA) for any action that may have a significant impact on the environment.

After the NEPA was adopted, many states followed suit with their own version of State Environmental Policy Acts (SEPA). In Washington State, SEPA was put into place in 1971. Much like NEPA does for the federal government, the SEPA process “identifies and analyzes environmental impacts from governmental decisions. These decisions may be

related to issuing permits for private projects, constructing public facilities, or adopting

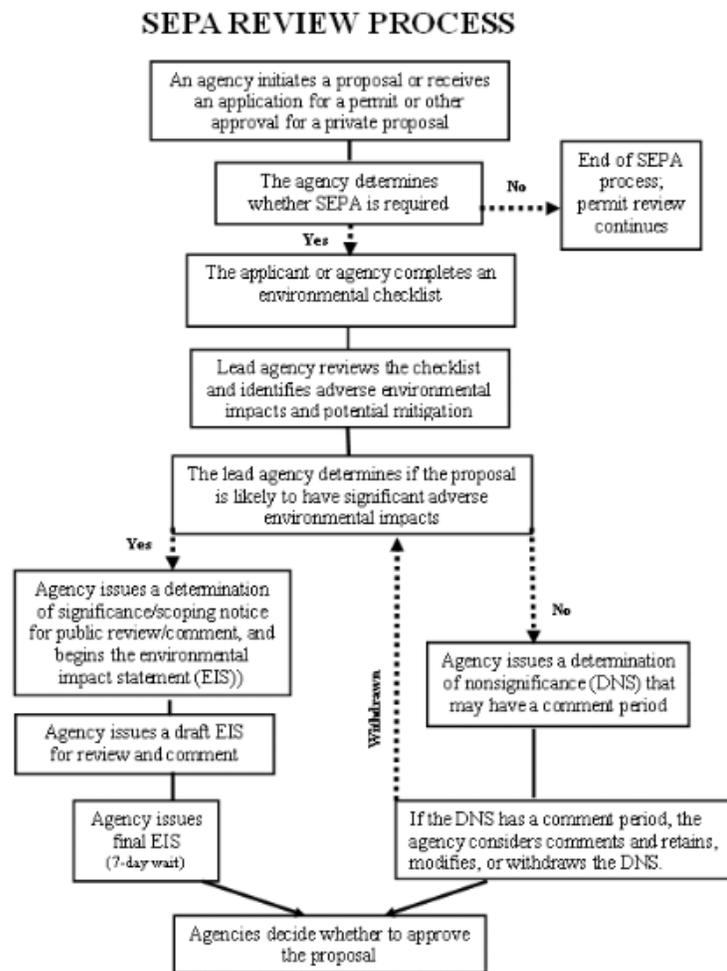


Figure 1. Overview of the SEPA process in Washington State (courtesy of the Washington State Department of Ecology SEPA website).

regulations, policies, or plans” (“State Environmental Policy Act”, n.d.). Both the NEPA and the SEPA processes not only include government decisions, but also include initiatives of private individuals or companies when they apply for permits from the federal or state government (Council on Environmental Quality, 2007).

Figure 1 illustrates the SEPA review process. The process begins with an applicant for a permit or private proposal. In this case, NWIW was the applicant for approval and there was discussion among different agencies of who should be the lead agency. The three different potential agencies were the City of Tacoma, Port of Tacoma, and Washington Department of Ecology. The state did not want to be the lead agency because of staffing issues. The city decided to be the lead agency because it thought it would be “cleaner.” Once a lead agency is chosen, it has to determine if the project is likely to have significant environmental impacts, and the City of Tacoma determined that the methanol refinery would (Tacoma city staff, personal communication, February 17, 2017). If a project is likely to have an environmental impact then an Environmental



Figure 2. February 10th, 2016 public scoping meeting (photo courtesy of Rising Tide public Facebook page).

Impact Statement (EIS) is drafted. Public input is elicited asking what should be included in the statement. The city organized a series of meetings where both verbal and written comments could be given.

For this particular EIS process, the timeline is of importance. On December 6th, 2013, NWIW met with Governor Inslee to discuss the viability of a gas-to-methanol refinery. On December 19th, 2013, NWIW submitted a formal proposal to the Port of Tacoma for a gas-to-methanol refinery. The Port Commissioners approved a lease agreement with NWIW to build the gas-to-methanol refinery on May 1st, 2014. The public meeting was poorly attended, with only 17 public comments. Two years later, on January 21st, 2016, the first of two public scoping meetings occurred with over 1,000 participants. On February 10th, 2016, the second public scoping meeting was held, also with over 1,000 participants, a picture of which can be seen above in Figure 2. A few days later, on February 19th, at the request of NWIW, the City of Tacoma paused the required environmental review process. The City of Tacoma then canceled the third public scoping meeting scheduled for February 24th in light of the pause of the environmental review. Later NWIW withdrew the project entirely.

In an April 2016 *Tacoma News Tribune* article entitled "How Tacoma's methanol debate went sideways, and what we can learn from it," Matt Driscoll described the tone, temperament, and content of the discourse as being confrontational. As one city council member put it "...the discussion was kind of tearing our community apart" (Driscoll, 2016, para.6). The public was equally disillusioned with the process. One community activist commented that "they try to do the most minimum they can do to let people know what is going on" (Grassroots Community Organizer, personal communication, March 24

2017). In light of the criticism on both sides, there was a need for both citizens and government institutions to learn from this experience. Both citizens and institutions in Tacoma were asking how meaningful public participation could be facilitated and encouraged. This question is common to the EPP literature.

Literature Review

Many organizations and governmental institutions have included public participation in their decision-making policies. As mentioned, in the United States, the federal government and many state governments require public participation as part of the Environmental Impact Statement (EIS) process. An important component of environmental impact assessments is the requirement that it have public input at multiple levels (Council on Environmental Quality, 2007). As public participation has become the norm, the efficacy, efficiency, merit, and quality of the public participation in the EIS process is often questioned (Doelle & Sinclair, 2005; Kurian & Munshi, 2016; Shepherd & Bowler, 1997). Munshi and Kurian (2016) argue that, in general, the mechanisms for public participation are largely unable to keep up with the rapid social and economic changes in modern society.

A large body of literature has emerged that attempts to address the inefficiency of public participation. Common to these different fields, however, are the questions “What is meaningful participation?” and “What are the benefits of participation?” The insights various scholars have gained into these questions have coalesced into what has become known as the field of environmental public participation. The following literature review will first describe the academic discussions regarding the benefits of participation and what is meaningful participation. The review will then address what is structuration theory, followed by an in-depth discussion of the suggestions of Norton (2007).

Benefits of Participation

The normative benefits of participation have become a large focus of the EPP literature. Scholars and citizens alike argue that elite-dominated policy processes are not democratic, and that creating public processes with a wide variety of participation from a diversity of voices strengthens democracy (MacArthur, 2016). Some of the normative benefits of participation include decisions that are better for the environment or better quality decisions, are more democratic, and help to build capacity in the populace.

The argument that participatory processes lead to normatively “better” outcomes for the environment than non-participatory processes needs further research and refinement. One difficulty in this matter is defining what “better” is. “Better” for the environment is often defined as an undisturbed state that serves as a reference condition. This definition leaves us with a few questions. First, is the undisturbed state what should be the outcome of environmental decisions? For instance, if the undisturbed state is a swamp that encourages malaria near a populated area, then is leaving it undisturbed a better decision? In situations where this definition is adopted, further questions persist, such as when the undisturbed state was and who defines what it is (Valinia et al., 2012)? This definition is also limited in that it is only useful in land-use decisions. Even if one adopts this definition, there are still more questions about if public participation is more or less likely to encourage decisions that lead to an undisturbed nature.

The complexity of this issue can be seen in practical examples. For instance, researchers found that people were more likely to reduce electricity consumption when they were engaged in participatory approaches to energy management (MacArthur,

2016). These participatory processes reveal elements of the environmental decisions that were unknown before and lead to integration of local knowledge. This increased awareness leads to decisions that are “better” for the environment (Newig, 2007). In contrast, MacArthur cites the example of the discourse on climate change. He argues that the participation of more and more people has actually slowed the process and led to confusion regarding the transitions to renewable resources (2016). On the other hand, engaging the public in collaborative efforts on climate change adaptation has been shown to increase understanding about the risks and consequences of climate change (Serrao-Neumann, Harman, Leitch, & Low Choy, 2015). This question of if public participation leads to decisions that are normatively “better” for the environment deserves further research and focus. One area that has been well researched is the relationship between public participation and strengthening democracy.

One of the strongest arguments for public participation is that it strengthens democracy. One of the founding principles of democracy is that individuals should be allowed to express their views on a decision that affects them. This fundamental principle is upheld when individuals participate in environmental decisions (Glucker et al., 2013). Salomons and Hoberg (2013) catalogued how additional forms of participation in environmental decisions are required because of the weaknesses of representative democracies. They argue that because well-documented limitations of democracy exist, then additional forms of participation are required in addition to the election of officials. One such critique is that environmental issues are often transboundary and our elected officials are elected for a specific bounded area, meaning that elected officials for one area may have been elected by that locality, but their decisions on environmental issues

may affect a much larger area. Citizens from this larger area may not have had a chance to participate. Another critique of the democratic process is that policy-making has become far more complex. This increased complexity has caused citizens to become alienated from participating in democratic processes and has also caused well-funded interest groups to become more effective. Well-trained and well-funded interest groups are able to navigate the increased complexity, which stands in stark contrast to ordinary citizens who lack the skills or the funding to effectively participate. In short, as Salomons and Hoberg (2013) state, “Electoral democracy is a blunt representative instrument. Mandated public participation processes, in comparison, are able to address those representative linkages with much more precision” (p. 70).

Another one of the potential benefits of participation is the reconciliation of different viewpoints into a collective course of action known as social learning. Social learning is the process of deliberation among groups or participants that hold views that are considered irreconcilable to discover shared values, goals, and understanding (Glucker et al., 2013). Sneddon et al. (2005) state that “we each see different aspects of social environmental reality from different positions in society and through different lenses of expertise. Deliberative democracy can also counter our fragmented understanding of reality and lead to richer collective knowledge” (p. 264). Bull, Petts, and Evans (2008) did research on the long-term effects of public participation on social learning and found that social learning through participation can lead to “environmental citizenship” (p. 702). The emphasis, then, is on the process of participation, as opposed to any given outcome (Glucker et al., 2013).

These benefits though are often contingent on participatory processes being meaningful and not superficial. Significant research has addressed the question of what is meaningful participation.

What is meaningful participation?

A good deal of discussion in the literature has addressed the question of “what is participation?” In 1970, Carole Pateman remarked that the term participation was becoming so commonly used by such a variety of people in such a wide diversity of contexts that “any precise, meaningful content has almost disappeared” (p. 1). Definitions of the term participation have continued to evolve since Pateman made her observation. Concerns over the concept of “participation” have spread to such diverse fields as healthcare, urban planning, and, my main concern here, environmental governance. A considerable amount of work has gone into defining what participation is and beyond that what meaningful participation is.

Sherry Arnstein, whose 1969 seminal document was “A Ladder of Participation,” defined participation as “the redistribution of power that enables the have-not citizens, presently excluded from the political and economic processes, to be deliberately included in the future” (p. 216). Arnstein is renowned for her work both in medicine and public policy, and especially for her efforts to desegregate hospitals. Early works such as Arnstein’s made an effort to categorize different types of participation. The ideas present in “A Ladder of Participation” have influenced fields such as geography, health, urban planning, sociology, and public policy.

The ladder describes a spectrum of participation (Arnstein, 1969). It begins by describing lower levels not considered true participation, such as manipulation and therapy. These rungs of the participation ladder are marked by institutions that make decisions and either feign participatory processes or merely describe the process to the public. The middle of the ladder includes informing, consultation, and placation. These rungs are considered tokenism because the public may “hear and be heard,” but there is no assurance that their voices will be included in the decisions made by the institutions. The top rungs of the ladder are marked by delegated power and citizen control. Citizens have considerable power in the decision-making process in these rungs.

The ladder of participation was an important contribution because it reconceived of participation as a spectrum instead of a simple yes or no question of presence. Commenting on the participation ladder, Arnstein (1969) noted that “it helps to illustrate the point that so many have missed—that there are significant gradations of citizen participation” (p. 217).

As the literature evolved, efforts to categorize participation have received some critique. O’Faircheallaigh (2010) remarks that frameworks such as the ladder imply that the different types of participation are not interrelated, even though they are. For instance, lower forms of participation, such as information sharing, can lead to other forms, such as gaining decision-making power. Naturally, as a result, definitions of participation in the literature have evolved.

In addition to academic definitions of participation, practitioners of the field also changed how they implemented participatory processes in the field. Participation in the

1960s was defined as mere “awareness-raising” and mostly was limited to the sharing of information (Van Tatenhove & Leroy, 2003). It then evolved to include local populations in data collection and planning in the 1970s (Pretty, 1995). Later, in the 1980s, participation came to mean the incorporation of local knowledge (Chambers, 1983). Participation then became a norm in the 1990s of the development agenda in the context of the Third World. Pretty (1995) wrote that participation had become so widespread that everyone in development was claiming that participation was part of their work and that:

...the term ‘participation’ has been used to justify the extension of control of the state as well as to build local capacity and self-reliance; it has been used to justify external decisions as well as to devolve power and decision making away from external agencies: it has been used for data collection as well as for interactive analysis. (p. 1251)

In response to this over-abundance of participation, the concept was heavily critiqued and analyzed in the early 2000s, including Norton’s (2007) work on structuration. This critique has given rise to the next stage, which is evolving into generating best practices from this long history and learning from mistakes. Reed’s (2008) efforts to generate best practices were a response to the critique of the 2000s that, though theory had evolved, practice was stagnant.

Reed’s identification of best practices is, therefore, an important step in the literature (2008). The eight best-practices are as follows: (1) participation must have a philosophy of empowerment underlying the process; (2) participation needs to be early and consistent throughout; (3) participation means systematic inclusion of stakeholders;

(4) participatory processes need to have clear objectives that are agreed on at the outset; (5) the methods of the participatory process should conform to the context of the decisions; (6) the process needs highly-skilled facilitation; (7) it should integrate local and scientific knowledge; and (8) participation should be institutionalized (Reed, 2008). These best practices are a useful frame to analyze what constitutes a good-quality participatory process.

Reed (2008) defined participation as "a process where individuals, groups and organizations choose to take an active role in making decisions that affect them" (p. 2417). The question of whether individuals, groups, and organizations have to take an active role or not in order to "participate" has been raised in the literature. The problem with this definition is that it restricts participation often to formal spaces where these actors decide to participate. Another definition of public participation is "any form of interaction between government and corporate actors and the public that occurs as part of EIA (Environmental Impact Assessment) processes" (O'Faircheallaigh, 2010, p. 20). A prerequisite for this definition is that some form of institutional actor be present in order for participation to occur, but this omits the many diffuse, informal conversations in which very engaged actors participate. As Norton (2007) argues, we need to "theorize outside the public meeting but maintaining a concentration recognizable as public participation" (p. 152). A frontier, then, of participation literature is to look past the large public meeting and to study more informal forms of participation.

The definition of participation this thesis will use includes both formal and informal participation. The formal spaces definition includes attending and speaking at public scoping meetings and giving written feedback to be included in the Environmental

Impact Statement (EIS). The informal participation includes the loose diffusion of conversations that occurred regarding the gas-to-methanol refinery. This definition is useful because the two reinforced one another. The multitude of informal conversations about the plant shaped the formal comments and vice versa.

Questions around what are the highest and most meaningful forms of public participation have persisted. In the ladder, higher forms of participation are defined as being associated with institutionalized forms of participation in a bureaucracy (Reed, 2008). Scholars have noted that this added bureaucracy does have many pitfalls. These institutions can propagate gaps in participation and be partial, engendering certain interests over others (Norton, 2007). For instance, Shepherd and Bowler (1997) describe a participatory process undertaken by the military in which the very institutions in an EIA designed to encourage participation actually did the opposite. They describe how the military created a series of spaces for participation, but, since the decision was, in-effect, already made, these spaces only created anger and resentment towards the military (1997). Many of the organizations to which power is delegated are not prepared for such an undertaking and delegating power to them can realign their purpose to the detriment of the organization (Tritter & McCallum, 2006). While it is generally noted that these institutions have problems, there is little agreement in the literature about how to avoid these pitfalls (Norton, 2007).

One recent trend affecting what it means to meaningfully participate is the introduction of social media. Social media has changed public participation for both the participants and the institutions that organize the formal processes. For participants, social media can serve as a place for like-minded individuals to meet and organize around

issues of concern and plan how they intend to collectively organize around these issues. Not only does social media serve as sources of information and connections, but also social media can actually challenge power relationships. Individuals, “by sourcing their own information and creating content online, independent from institutions, may become capable of challenging traditional societal power holders such as government, media, and corporations” (Sormanen, Lauk, & Uskali, 2017, p. 78).

There have been a range of responses from institutions in regards to public participation and social media– from ignoring social media altogether, to embracing and using social media. Due to entrenched rules and bureaucracy, many “public agencies tend to privilege a hierarchical management of citizen participation mechanisms and therefore exercise caution with regard to social media, especially online forums” (Boudrea & Caron, 2015, p. 253). One example of institutions embracing social media was described in a study by Bryer (2013). Bryer explored the construction of a controversial subway extension in Los Angeles that would go under a high school where natural gas had been found. There was considerable concern on the part of citizens that there could be explosions. To help facilitate public participation, the city established a Facebook page and twitter account to not only inform but, more importantly, facilitate a discussion (Bryer, 2013). This study showed a variety of relationships institutions can have with social media. These relationships can be seen as a spectrum including hesitancy, indifference, and strategic use of social media.

The Institutional Focus of Research

In trying to improve the quality of environmental public participation, one trend that has emerged is a focus on the institutions that facilitate public participation. Although this approach does have merit, the problem is that sometimes the participants are omitted in the process. The following study by Shepherd and Bowler (1997) illustrates how the institution-focused approach is carried out in the literature. The environmental public participation literature is broad and this is only one common approach, but it seems useful to illustrate this case study as an example and then discuss others briefly.

Shepherd and Bowler compared two participatory processes, both conducted by the United States Army, using a set of “rationales” for public participation, including democracy, sustainability, conflict resolution, and improved planning (1997). The first participatory process they analyzed was the chemical demilitarization program that sought to dispose of chemical weapons. The Army proposed that the chemical weapons be incinerated at eight, weapon-storage sites. The Army brought this proposal to the public scoping meetings. The citizens responded with suspicion, feeling that the decision had already been made and that the Army was unwilling to revisit previous decisions. As the Army decided to go forward, the citizens resorted to suing the Army. The program has since been put on hold, as the expected costs due to public opposition have risen.

In the second, the United States Army also conducted a participatory process in northwest Washington D.C. when undetonated World War I chemical munitions were found. This public participatory process could not have been further from the one

mentioned above. Early on, the Army acknowledged the importance of public participation and strove for early and continuous involvement of the public. The Army was able to regularly communicate with 13,000 residents through mail, 80 public meetings, calls, site visits, and a newsletter. There was also a database created and each area had a local resident who was responsible for communicating between the local residents and the Army (Shepherd & Bowler, 1997). The operation was a success, there were no lawsuits, and one citizen remarked afterwards that the “Army was always communicating with us and seeing if there was anything that we didn't like. They really took the effort to reach out to us” (p. 730).

In light of the above two examples, Shepherd and Bowler (1997) said “our analysis shows that a proactive, rather than reactive, approach can provide benefits for the project proponent, the public and the final plan” (p. 738). The takeaway, then, is that institutions should be more proactive. There is nothing wrong with that, but it does put the onus for public participation on institutions, not the public. In short, the researchers focus on the institutions that create structure, but oftentimes unintentionally exclude the agency of the participants. This common approach can also be seen in other case studies. Byer (2013) focuses on how institutions can use social media. De Santo (2016) focuses on “how well the UK Government implemented its obligations” in public participation processes (p. 91). The before mentioned best practices by Reed et al. (2008) focus on the role of the institution in facilitating the process and adhering to these practices. Norton (2007) argues that a structuration theory model could add a more nuanced lens to the view of EPP—in effect, returning the participant to studying public participation.

Structuration Theory and Environmental Public Participation

Many different scholars and sub-fields have made an effort to explore environmental public participation. Norton (2007) comments that these many fields often do not have the means to communicate one with another, particularly on the question of what it means to participate meaningfully. He states that “an abundance of literature (across disciplinary boundaries) asserts that current mechanisms do not work, yet we lack any common theoretical ground to genuinely base such claims or compare case studies; participatory failure or success based upon what standards, which criteria, and whose goals?” (p. 146). He suggests that a conceptual framework guided by structuration theory can help, stating that “my stated purpose in this essay was the articulation of a theoretical grounding of EPP literature and to merge currently fractured areas of research” (p. 162). The purpose of this section of the literature review is to briefly explore the structure and agency debate found in sociology, describe structuration theory, and then look at Norton’s efforts to create a structuration environmental public participation conceptual framework.

The discussions around structure and agency can be traced back to some of the early founders of sociology, such as Emile Durkheim and Max Weber. The debate often circled around what is structure, what is agency, which is more powerful, and efforts to reconcile this perceived dichotomy. Some social theorists argue that the “structures” of society are the dominant operating force in conducting human affairs. Emile Durkheim, considered one of the fathers of sociology, is a prime example. He argued that “social facts” are the dominant force in shaping human behavior and actions. Social facts are inherited from previous generations and control the choices and will of individual actors

(Elwell, 2003). Other theorists put an emphasis on the individual's power of agency. Common to this arena of thought is the view that society is merely the conglomeration of our individual choices (Tan, 2016). Max Weber (1922), also considered a founder of sociology, is closely associated with this perspective on agency. These theorists see society as a product of the micro-actions of individual actors.

In addition, there is a group of theorists (Archer, 1982; Giddens, 1984) who have worked to reconcile structure and agency. According to these theorists, structure influences agency and agency influences structure. These theorists focus on the dialectic between structure and agency (Tan, 2016). One of the most well-known theorists in this category is Anthony Giddens, who proposed what is known as "structuration theory." Giddens (1984) argued that neither structure nor agency had supremacy. Instead, he argued that both structure and agency are integral to creating social systems. In short, agency can create the structures and structures subsequently influence agency. In proposing this, Giddens proposed different conceptions of what actor and agency is, what structure is, and proposed an idea known as structuration.

Critical to the work of Giddens (1984) is his description of actors. He states actors "routinely and for the most part without fuss maintain a continuing 'theoretical understanding' of the grounds of their activity" (p. 6). The action of actors is also not thought of as one action. Giddens describes "action" thusly: "Action depends upon the capability of the individual to 'make a difference' to a pre-existing state of affairs or course of events. An agent ceases to be such if he or she loses the capability to 'make a difference', that is, to exercise some sort of power" (p. 15). Importantly for Giddens, action can either be intentional or unintentional and can have effect either way. Also

notable is that Giddens' conception of actors is not simplistic and disconnected from the world. Giddens believes "Human practices are recursive—that is, through their activities, individuals create both their consciousness and the structural conditions that make their activities possible. Because social actors are reflexive and monitor the ongoing flow of activities and structural conditions, they adapt their actions to their evolving understandings" (Ritzer, 2003, para. 2). Actions are connected to structure.

In relation to structure, Giddens (1984) conceives of it as "the structuring properties allowing the 'binding' of time-space in social systems, the properties which make it possible for discernibly similar social practices to exist across varying spans of time and space and which lend them 'systemic' form" (p. 17). Giddens breaks down structure into "rules and resources." "I use the concept of 'structures' to get at relations of transformation and mediation which are the 'circuit switches' underlying observed conditions of system reproduction" (p. 24). An important aspect of Giddens' conception of structure is that it is not only constraining, but also enabling. He states that rules and structures allow participants to do things they would not have been able to do otherwise (1984).

The relationship between structure and agency is described by Giddens (1984) as dynamic and interchanging. Giddens describes two different possible relationships between agency and structure. Giddens describes homeostatic systems characterized by "the operation of causal loops, in which a range of unintended consequences of action feedback to reconstitute the initiating circumstances" (p. 27). But he also describes "strategically placed actors seek[ing] reflexively to regulate the overall conditions of system reproduction either to keep things as they are or to change them" (p. 28). He was

particularly interested in how repetitive actions can influence structure, calling it “structuration.”

In response, Giddens’ structuration theory drew criticism. One of the most famous responses was by Margaret Archer, published in the *British Journal of Sociology*, called “Morphogenesis versus structuration: On combining structure and action” (1982). Archer criticized various aspects of Giddens’ theory. One was its emphasis on individualism and agency. Archer pointed out that Giddens may have over-valued the power of individuals (1982), meaning that Giddens had “‘conflated’ the human agent with the system” (King, 2010, p. 254). Specifically, Archer took issue with Giddens’ (1984) assertion that “structure is not 'external' to individuals,” but that it exists “as memory traces, and as instantiated in social practices” (p.25). Archer asked, if structures are merely internalized aspects of individuals, why do they not just ignore them? That said, Giddens (1984) does not believe individuals are all-powerful. He says that even though individuals can create structure this “does not prevent the structured properties of social systems from stretching away, in time and space, beyond the control of any individual actors” (p. 26). In short, this criticism contends that Giddens put too much emphasis on agency and is, to a lesser degree, a return to the very dichotomy Giddens had tried to resolve. I agree that structuration theory is not perfect, however, it was still a marked advance in reconciling this dichotomy by making a connection between structure and agency, even if that connection needs further clarification.

Norton (2007) suggested that an Environmental Public Participation (EPP) structuration theory can help scholars build a unifying conceptual framework across a variety of fields. Norton argues that “here we find a move against dichotomous thinking

and toward dualisms of practices within structures, and structures of practice. In short, a structuration approach provides linkages between in-situ micro-practices and macro-structural considerations” (p. 177), i.e., the very act of participating can change the structures of society that have power over participation and vice versa. Looking for the interplay between structure and agency can help scholars further understand the nature of public participation. Norton suggests a variety of concepts that can help with this, stating “[t]hrough this lens I articulate the basic premises of a structuration model for environmental public participation, pointing especially to issues of agency, which involves ontological security and ontological competence, social systems, and various elements within duality of structure, with an eye toward communication-centered research” (p. 146). In particular, the duality of structure ideas he presents are relevant to the research questions posed in this thesis.

By putting emphasis on both structure and agency, the structuration conceptual framework can help Environmental Public Participation. Using an EPP structuration theory lens, Norton (2007) states “current assessments of EPP rules and resources are overly focused on the institutional mechanisms, in that it is only the institutional power over processes that inhibit participation. Assessments of these mechanisms typically travel the path of critiquing the failure of structure to capture genuine participation” (p. 158). In my analysis of the literature, I also found this emphasis on institutional mechanisms. Many of the studies tend to emphasize the structures of society and often forget the agency of the public participants in the process. Many theorists focus primarily on technical concerns, such as how meetings are structured or what the outreach efforts are employed (e.g., Reed, 2008; De Santo, 2016; Shepherd & Bowler, 1997). Reed’s

(2008) list of best practices focuses primarily on the structures that institutions create. Some of Reed's best practices that could be considered as focusing on structures include high-quality facilitation, earlier invitations to the process, and institutionalization of participation. Reed (2008) does mention a philosophy of empowerment underlying the process as a best practice, but even this is presented through the lens of how structures can be organized.

The Shepherd and Bowler case study (1997) discussed above was focused entirely on what the military did in eliciting participation and only viewed the participants as respondents to the institution. As Norton (2016) argues “[a] growing body of participation literature muses over why current mechanisms of public participation persist when they so often fail; [and] calls for expanding the conceptual boundaries of participation beyond institutional mechanisms” (p. 146). These case studies all analyze decisions made by institutions regarding how participation will be elicited, and then they analyze these decisions.

Doelle and Sinclair (2005) have pointed out that the fixation on process, such as when a meeting will be held and how long the comment period is, can actually discourage participation. This fixation on designing the process often assumes that the public is ready to give input and places unrealistic expectations upon the public. They tend to treat the public that is trying to participate as though they had been participating since the beginning of the project and fail to educate, inform, and build capacity within the public to participate (Doelle & Sinclair, 2005). In my own analysis of the literature, I found evidence for Norton's (2007) statement that “[t]he trend in contemporary literature operates within the assumptive position, which is wrong in my view, that institutions are

in control and therefore accountable for all dimensions of participation” (p. 159). In contrast, I have found there is very little analysis of the agency exerted by the participants.

My case study is unique in that it looked for the recursive nature of structure and agency. My research is not, as Beierle and Cayford (2002) say, “yet another case study in public participation” (p. 1). Norton (2007) proposed the idea of connecting structuration theory to the study of public participation in environmental impact assessments, but did not look at any practical examples. As mentioned in the introduction, analysis of this framework in practice can be used to test the utility of this framework. In order to explore the relationship between structure and agency in this case study and to elaborate upon an EPP structuration model, a variety of qualitative methods were used.

Methods

This thesis explores the utility of a structuration framework for the study of environmental public participation (EPP) via a case study of the Tacoma methanol refinery public participation process from 2014 to 2016. Asking (1) if and how public participation in the 2016 Tacoma methanol refinery environmental assessment affected the structures of public decision-making and (2) if and how the structures of public decision-making in that case influenced the nature of public participation. This research used qualitative content analysis, interviews and coding, to better understand the nature of the interaction between structure and agency and the application of structuration theory to a specific case of EPP.

Site Selection

The Tacoma methanol refinery was chosen for this case study in order to address the lopsided emphasis in EPP literature on the structure and design of the participatory process. As described in the previous chapter, there is much less analysis of the role of agency in shaping public participation processes and outcomes. In order to better understand how agency influences or does not influence this structure it makes sense to analyze a case in which agency is strongly present. Such was the case in Tacoma during the participatory process.

Participant Selection Process

The participation selection process used both purposeful and opportunistic sampling. Purposeful sampling was to set up the interviews with city officials. Purposeful sampling is the identification of individuals to intentionally provide insights into different parts of the research question (Palinkas et al., 2015). City officials who organized

participatory events were identified for interviews through the minutes of the environmental scoping meetings. For members of the public, opportunistic sampling was used. Opportunistic sampling is finding participants by who is available (Palinkas et al., 2015). In reading the minutes from the scoping meeting, participants were identified that could be contacted based on the information they gave during the meeting. In addition, the snowballing method was used. At the end of interviews, the participants would refer to me other individuals that they think would be useful for my research question.

Semi-structured interviews, qualitative content analysis, and historical analysis

Two different qualitative methods were used to answer the research questions: semi-structured interviews and qualitative content analysis. There are two different reasons that interviews were used in my research. First, the research was investigating complex behaviors and motivations. The research was asking how actors perceived the structures and changed their actions because of them and vice versa. Second, the research required collecting a diversity of meaning, opinions, and experiences (Hay, 2010).

Ensuring a diversity of viewpoints was an important part of the participant selection process. In selecting who to interview, it was insured that there were individuals that both participated and organized participation. In order to do this, both activists and city staff were interviewed. Individuals who were interviewed include a grassroots environmental activist; an outreach coordinator for an environmental NGO; a former member of the Sustainable Tacoma Commission that had resigned during the refinery debate; a city staff member that organized the scoping meetings; a city official; and a member of a union that had spoken in

favor of the methanol refinery. Though only six individuals were interviewed, it was more important to have a diversity of viewpoints than a large number of people interviewed. These interviews were also complimented with public comments given during the scoping meetings.

It was important to interview individuals who participated in different ways. Some were cautious about explicitly coming out against the refinery, while others were openly and vehemently opposed to the refinery from the very beginning. Not all those interviewed were opposed to the refinery. A union representative who had spoken in public meetings in favor of the refinery being built was also interviewed.

The interviews were semi-structured. This means that I had questions prepared (see below), but I was also willing to be flexible in both order and what questions that were asked.

Interview Questions for Citizens and Members of NGOs

1. How did you become involved in public participation in environmental issues?
2. What were your thoughts about the proposed plant? Did these feelings impel you to participate in the discussions?
3. Can you describe your participation in the conversations around the proposed Tacoma methanol refinery?
 - a. Did you attend any of the public scoping meetings? What were your thoughts about them?
 - b. How did you first hear about the proposed plant?
4. What are your thoughts about the organization of the public participation spaces by the City of Tacoma?
Did you feel like public participation was adequately organized?
5. Do you feel that the public participation influenced the organizers? If so, how?
6. Is there anything else you want to add about the nature of the participatory process? If so, what?

Interview Questions for City Officials

1. What is your position?
2. How do you first hear about the proposed Tacoma methanol refinery?
3. What are the policies around public participation for projects such as this?
4. How does participation in the public commenting for this plant compare to others?
5. How did the institutions react to the public participation during the commenting period?
6. Did the public participation in this project change the design of public participation as the process unfolded and, if so, would you please describe this?
7. Did the nature of the public participation in that project change design of future public participation spaces? If so, how? Would you do anything differently now?
8. Is there anything you want to add about the nature of the participatory process? If so, what?

In addition to semi-structured interviews, qualitative content analysis was used. Qualitative content analysis is a means of coding text content. The purpose is to find themes and patterns in qualitative content. In this case, the purpose was to find themes and patterns about participation in minutes from Tacoma City public scoping meetings, port meetings, and government documents such as the transparency plan.

The qualitative data were from two environmental impact statement scoping meetings held by the City of Tacoma. The meeting minutes were taken by Tacoma City staff. The minutes were verbatim transcripts of what the participants had said. These public meetings were open to all. The meetings were held on January 21st and February 10th of 2016 at the Tacoma Conference Center. Over 200 individuals spoke between the two meetings, generating 297 pages of transcript notes. Those transcripts are available to the

public on the city website. Although, occasionally, comments from those speaking were inaudible, in general, the manuscripts were high-quality and coherent.

These meetings had both citizens and officials speaking. There was less content for city officials/staff because they only opened and closed the meetings with comments. In order to supplement these comments, the Port of Tacoma commissioner meetings where the methanol refinery was approved were also analyzed. I also attended these meetings and can also draw upon participant observation as another method to inform my analysis.

Coding

Codes were generated both from the literature beforehand and through the interview process. Codes were generated deductively by identifying major themes in the published literature, as well as inductively from the data collected (Hsieh & Shannon, 2005). For instance, a code generated was “structural changes.” This code was used when an individual mentioned ways in which structures of society were changed. In contrast, a series of codes such as “early and regular inclusion” and “high-quality facilitation” were derived from the study by Reed et al. (2008) discussed in the previous chapter, which coded best practices of participatory processes.

One challenge in coding is to ensure that the codes were defined neither too concretely nor too abstractly. If the definitions are overly concrete, then good data may be excluded on what amounts to a technicality. If the definitions are overly abstract, then the opposite occurs: it is impossible to sift through the data to find the useful concrete examples (Gordon, 1992). In this case, codes were generated and then reflection upon the codes was done, with the goal of striking a balance of the sort recommended by Gordon.

Equipment

The equipment used in interviews was a recording device and Microsoft Word. The recording device used was a Galaxy Grand Prime. In order to code the recorded interviews, the interviews were transcribed and analyzed. During transcription, the interviews were slowed using Windows Media Player.

Critical Reflexivity

As I have undertaken this research I have reflected on a few different areas that influenced my research. Some these areas include my relationship with the Tacoma methanol refinery itself and my own beliefs about participation.

My own personal belief, as a resident of Tacoma, was that the methanol refinery should not be constructed. This belief was the first bias that I had to address as I undertook this project. I had to be careful, as I read the transcripts, how I interpreted those whose views about the proposed plant differed from my own. I did not want to take an unnecessarily critical stance towards those individuals. As the main concern of this research was participation, and not the construction of the plant itself, it was actually not important to my topic whether someone was for or against the plant. During interviews, when participants expressed views about the plant itself, I refrained from responding or discussing it.

I also have a particular relationship with the concept of participation. I believe that participation itself has inherent, normative value and also improves the quality of decisions made. This is a belief that underlies my work. I do not feel like this impaired my work or objectivity. In contrast, I feel like this normative value kept me motivated. I also do not think it stopped me asking difficult questions. For instance, I wondered “does

participation lead to better outcomes for the environment?” and “what of participatory processes that decide to degrade the environment?” I elaborated upon this question in the literature review. The following section describes the results and presents a discussion of my research findings.

Results and Discussion

This results and discussion section will explore how agency and structure influenced each other. It will end by looking at the implications of these findings for the utility of structuration theory in the study of EPP. It will look at the findings in light of the literature reviewed earlier. The first question is: Did agency influence structure and, if so, how? In the course of the interviews and analysis of the qualitative research, it became clear that agency had influenced structure in four noticeable ways: a new norm created in the community of increased public participation; increased transparency; new avenues opened for public participation such as social media; and, finally, public participation expanded the scope of the EIS to the point where NWIW actually withdrew its proposal. Increased transparency by institutions since the methanol refinery public participation process was something that all those that I interviewed mentioned. In regards to the second theme, all of those that I interviewed mentioned that Tacoma's collective relationship with public participation had changed as a result of the proposed refinery. Only the city representative mentioned the third theme, and it was confirmed by the public comments made by NWIW. It was also clear that the structures had influenced public participation by limiting its power and scope. The lack of power and scope of the participants was mentioned by all the activists and members of NGOs that I interviewed. General descriptors will be given in order to protect the identities of those interviewed.

New Norm of Public Participation

Not all structures are created by institutions. One new structure that was created during the methanol refinery debate was a new norm in public participation. During the public commenting period for the draft EIS, there were unprecedented levels of participation. This continued in other environmental public participation spaces thereafter.

The unparalleled magnitude of the participation was something that all those that I interviewed agreed upon. One city staff member who had been working for the city for a substantial time said:

Usually a scoping meeting will (depending upon the scale) have 20 or 30 written comments from different interest groups like the Sierra Club or Ecology. You get 20 or 30 letters and you probably have 20 or 30 people. I booked a room for 200. My colleagues thought I was crazy and then I booked the room next door for over-flow. We ended up having a lot more than that... I am going to guess we had 1,200. (Tacoma City Staff, personal communication, February 21, 2017)

A public outreach coordinator for an environmentalist group commented that there were “unprecedented levels of public participation. Absolutely unprecedented,” and also said:

So, I think the first thing to note is the number of people that attended those hearings was far beyond anything we have seen in Tacoma. I mean hundreds of people showing up. Packing the room. Standing room only in the biggest venues in the city. So that was huge. The overwhelming majority of those people were

speaking out in opposition to the project. (Environmental Outreach Coordinator, personal communication, March 9, 2017)

There were similar comments from the others that I interviewed as well.

This new norm of public participation can be seen in the degree to which public participation continued after the methanol refinery debate. The environmental NGO representative went on to say:

We really woke up as a community and said, ‘we are not going to allow this in our community.’ And since then, I think we carried a lot of that momentum forward. We haven’t seen the same levels of public participation around public issues, but we have seen way more public participation than I think the average before methanol. (Environmental Outreach Coordinator, personal communication, March 9, 2017)

Another grassroots activist describing participation levels after the refinery said:

Now people show up; they show up every time. The [*Tacoma*] *News Tribune* has a presence there they didn’t necessarily before. And if they don’t show up, they watch the videos. Every time there is a port meeting, we spread the links around. Alert everybody. We pay attention to the agenda. It isn’t just the port, but the port alliance. And, for example, at the city council meeting now two days ago there was two hours’ worth of public commentary. The fire marshal said okay only a couple more because we are at max capacity. People still participate. (personal communication, March 24, 2017)

After the methanol refinery debate in Tacoma, the new norm to participate was strongly in place. This connects to Giddens' (1984) original argument in which he states "actors not only monitor continuously the flow of their activities and expect others to do the same for their own; they also routinely monitor aspects, social and physical, of the contexts in which they move" (p.5). It is also consistent with the description of structuration by Norton (2007) and Giddens (1984). They described a process by which an accumulation of small actions creates new structures and then individuals reflect on those structures and act accordingly. In this case, the accumulation of all the minute actions of the participants culminated to create a new norm around participation. Actors then reflect and see this new structure and, in this way, there is a feedback loop.

Port of Tacoma Transparency Plan

In addition to creating a new norm, another way agency changed structures was the influence of agency on the Port of Tacoma's policies on public participation. In response to public criticism, the Port of Tacoma enacted a new transparency plan.

One common point of concern among activists was how the Port of Tacoma had leased land for such a significant project in what many felt was a process without public participation. As the environmental NGO outreach coordinator said, "I think the elected officials are saying 'hey, we need to rethink our public engagement strategies and rethink how to communicate our information because people are pissed and they are not just going to remain asleep anymore'" (Environmental Outreach Coordinator, personal communication, March 9, 2017).

In an analysis of those meeting notes, it is clear that there was very little public participation when the lease was signed. At the meeting on May 1st, 2014, when the lease was proposed and signed, there were 14 public comments. The meeting was attended by 97 individuals. Of the 97, only eight were listed as residents of Tacoma in the meeting minutes. The rest of the individuals belonged to a variety of institutions such as members of unions like Local Iron Workers 86, workers for the city, or workers for Pierce County Economic Development Council. These individuals may be citizens of Tacoma, but were not listed as such in the meeting minutes (Port of Tacoma, 2014, p.1). The Port Commissioners at this point seemed to think that signing the lease would just be the beginning. Commissioner Bacon said, “For those folks who didn’t know anything and hadn’t heard anything, I would urge them to go to the meetings that the Northeast Tacoma group holds and any other meetings up there so they can find the information, because it is impossible to knock on everybody’s door and give them all of the information that they need” (Port of Tacoma, 2014, p.6). Additionally, Commissioner Johnson said:

The concerns are valid concerns. In this two-year study, these issues will be brought up and they will be addressed. So, all we are doing is kicking off the process. It doesn’t end the process. For those who didn’t get to comment publicly or didn’t want to comment publicly, we do have the Port’s website and you are welcome to send emails with your comments. (Port of Tacoma, 2014, p.6)

Even at this early point though, citizens were beginning to be concerned about the lack of information in regards to this project. Tacoma resident Michelle Holdin said:

The other complaint I have is the outreach. There are a lot of people in our neighborhood. I asked if they had heard anything about this and they had [heard] nothing, no information whatsoever. So, if you guys can let us all know what's going on that would be great. (Port of Tacoma, 2014, p. 6)

The criticism of the Port of Tacoma's signing of the lease and lack of eliciting public participation magnified as the EIS process advanced. Afterwards, one grassroots community organizer said:

I went there and the Port Commissioners already signed a lease without any public discourse. They signed a 40-year lease with NWIW, which is owned by the Chinese government. The group is called CASH... and they signed a lease and we were like "What?!" At that point, we had no idea they were going to be using 15 to 20 million gallons of water a day and 45 megawatts of electric[ity] — that's enough to power 450,000 homes. (grassroots community organizer, personal communication, March 24, 2017)

As a result of the public agency and participation exerted during the methanol refinery EIS process, the Port of Tacoma enacted new transparency and public participation guidelines. In a July 21st, 2015 meeting, the Port Commission proposed changes to the Master Policy that would require three public meetings for any lease that meets either of these requirements: (1) stores, processes, manufactures or distributes fossil fuels including, oil, petroleum based fuels, natural gas and coal on more than 10 acres of port land, or (2) uses more than one million gallons per day of water, or uses more than 26 megawatts (MW) of electricity (Port of Tacoma, 2016).

The new policy on public participation added significant layers to the public participation process. After being initially tabled, these changes were approved by the Port Commission in January of 2017 (Miller, 2017). As of the date of this thesis, the final draft of the plan is yet to be published and shown in a master plan.

The causal link between these changes and the agency exerted by participants in the public process is also clear. The Port Commissioner said, “We heard you, and you needed more information, and you needed it more timely, and you needed to know what’s going on” (Miller, 2017). Most of the individuals I interviewed also connected the transparency plan directly back to the methanol refinery discussion. I called and left multiple voicemails with the Port of Tacoma, but no one at the port responded to my requests for an interview. A number of news reports written by Katie Miller (2017) of the *Tacoma News Tribune* directly link the changes in the transparency plan to the public participation in the methanol refinery process. After the methanol refinery was canceled, the city also initiated a series of meetings with the port to review communication and public participation processes (City of Tacoma, 2017).

Social Media

Another clear area where the agency exerted by participants changed the structures and norms around participation was in regards to social media. The prominence and importance that is now given to social media was not something present before the participation around the methanol refinery.

After the EIS process, the Port of Tacoma introduced a measure whereby they could answer questions from their website. According to the *Tacoma News Tribune*, port

staff were ordered “to produce a section on the website where citizens can see the answers to questions they ask during the public comment section of the meeting” (Miller, 2016).

In interviews with city officials, the prominence of social media became clear. One city staff member who helped to organize the public meetings remarked that:

People said I should have paid more attention to Facebook, but Facebook is not part of my life nor will it be. It is not productive use of my time. We could have done a much better job of tracking to see the number of people interested. There were people signing up to go to meetings. One of the lessons learned from the planning department was I don't have to do it but someone needs to keep track of social media postings to make sure the space is big enough. We are not going to make that mistake again. (Tacoma City Staff, personal communication, February 21, 2017)

Those organizing environmental outreach agreed with this saying:

Every once in a while, if we put out language on our social media that is incorrect or that the city might take issue with us, they might email us and say we saw this post [and] here's a correction... I haven't been around too long but that didn't happen as much before methanol. I don't think posts were as scrutinized as they are now. (Environmental Outreach Coordinator, personal communication, March 9, 2017)

During one of my interviews with the city official, in the middle of it he pulled out his iPad and showed me an unflattering post about the city that an activist had posted

that morning on Facebook. He then, in an exasperated tone, asked me “How do I respond to this?”

In my literature review, I mentioned two ends of a spectrum of institutional response to public participation via social media. On one end, there was hesitancy to participate, and on the other end, there was actively using social media as a means to facilitate a discussion (Boudrea & Caron, 2015; Byer, 2013). When looking at the results in light of that, it is clear that the institutions of Tacoma had been in the first category where they were reticent to engage in social media. After the methanol refinery public participation, it seems like the city and port realized they could no longer ignore social media. While the comments of those I interviewed makes me believe the institutions are no longer ignoring social media, I would not say, though, that they had reached the point described by Bryer (2013) of actively facilitating discussions via social media. Instead, they seem to want to listen in on the discussions that are already occurring online in order to understand how they might interact with the physical spaces for participation they are creating.

Expansion of the Scope of the EIS

Another way that agency influenced structure was by altering the complexity of the environmental review. This increased complexity caused NWIW to withdraw the proposal. While initially my research was not particularly concerned with the outcome of the process, this changed when it became clear that agency had changed structure enough to alter the outcome.

Most SEPA reviews analyze only local environmental consequences. In this case, the public asked for an analysis of the upstream and downstream consequences of the methanol refinery. They asked for the environmental cost of natural gas production, of piping it to Tacoma, of shipping it to China, and of producing plastics to all be included. The city staff of Tacoma obliged and this would have been included in the EIS process. As the city staff person said:

We were going to look at that whole process. That would have been fascinating. When you compare that to burning coal in China, when you look at all these external effects, getting the material there, is it really better than burning coal in China? From the city's point of view, we were ready to have that discussion.

(Tacoma City Staff, personal communication, February 21 2017)

The staff member also connected it to public participation by saying:

Having so much public interest made it much easier for the staff point of view to prevail. When you have 1,000 people say you need to study this thing exhaustively, it is pretty hard to ignore that. The conclusion of the study could have said we are just going to look at the impacts in Tacoma. So that was not the decision we made. (Tacoma City Staff, personal communication, February 21, 2017)

This broadening of the process significantly increased both the financial resources and the time required to complete the EIS. The money for the process is provided by the applicant, so NWIW was paying for the city staff to draft the EIS and facilitate the process. The public participation broadening the scope of EIS process increased the cost

and time of the public input process. Changing this caused NWIW works to reconsider the application and withdraw it. As the city staff member said to me “There is always this issue Josh: If you add more process are you de facto killing the project? Certainly in the case of the methanol refinery, because of the scope of work we were adding a couple years to the analysis” (Tacoma City Staff, personal communication, February 21, 2017).

In an interview with Kate Martin in the *Tacoma News Tribune*, Murray Godley, the President of Northwest Innovations Work commented it was not the protests that stopped the plant, saying, “Wherever you are siting a project like this, there’s controversy.” He went on to remark that it was the length and price of the environmental review process that was the primary concern. It would take two or three years and, he said, “At the end of the day, to get where we need to be, we’d look at an investment of \$30 million to \$40 million to get through the environmental review process” (2016). It is interesting to note that he said it was not the public outcry but the regulations that stopped the process. In the end though, the regulations only would take so long and cost so much because the public had asked for more to be considered in the environmental impact statement.

In addition to the above ways that agency changed structure, structure also influenced agency by promoting the sharing of information instead of decision-making power, and by also limiting the scope of the project to one plant.

Information and Power

While there were structural changes that came about as a result of the agency exerted by the participants, the question that lingers is how meaningful are these changes? If looked at in light of Arnstein's "Ladder of Participation," we can see that the structures created by institutions in this case study strongly reinforced lower levels of participation, including information sharing and notification, while at the same time resisting efforts to share power, which is associated with higher levels of participation.

The heavy emphasis put on sharing information can be seen in quotes from the Tacoma Port and from its master plan. This quote from the Port of Tacoma Commissioner puts heavy emphasis on sharing information: "We heard you, and you needed more information, and you needed it more timely, and you needed to know what's going on" (Miller, 2017). The changes to the Master Policy also placed this same emphasis saying "Notice of first and second reading and public study session shall be broadly disseminated to the public consistent with state law and current port practices" (Port of Tacoma, 2016). Also, the commissioner said "This is a first step. We are moving forward, and it may be TMI [too much information]. We are going to try our best to answer your concerns." In addition, in comments in the *Tacoma News Tribune* the Port Commissioner puts emphasis on the port's role in making the decision, noting "We will take all comments into consideration and make a decision on the best possible answer for the most people" (Miller, 2016). All of these comments show that the structures put in place by the institutions are committed to sharing information.

In contrast, these same structures are resistant to any sharing of power. During the public outcry, a group of citizens made an effort to have a referendum in which projects that seek to use more than one million gallons of water a day be approved by a public vote. It was called “the large water use initiative.” This was clearly an effort to increase public power and input. This effort was stymied by a series of lawsuits from different institutions, one of which was the Port of Tacoma. Even the additional steps for public input now required by the new transparency plans are dependent upon the decisions of the Port Commission. The final draft of the revised master plan includes a provision in which the second public meeting can be waived if it is decided upon by the Port Commissioners.

At a joint meeting of the City of Tacoma and Port Commissioner Peter Huffman, the Director of the Planning and Services Department, said, “Public comments should have ‘Standing’” (2017). This was the only comment that I analyzed or came upon that seemed to indicate these institutions are not only thinking about changing the information sharing and notification process, but also the power of the public input. That being said, what “standing” means and how it would be included in the participatory process seem to be questions going forward.

Another example of the limits of power was the lack of power of the Sustainable Tacoma Commission during the public participation process. The Sustainable Tacoma Commission is an effort to institutionalize public participation, as it is made up of citizens who apply to be part of the commission. According to its website, the commission is “responsible for implementing the strategies in the Climate Action Plan and measuring the city’s progress as it reduces greenhouse gas emissions” and is

comprised of a “balanced representation of stakeholders, such as the environmental community, small business, labor, housing, industry and port, transportation, education, building industry, and residents” (City of Tacoma, 2017). This initiative is reminiscent of one of Reed’s (2008) best-practices of public participation, which is the institutionalization of participation. That is to say, that participation is structured.

The reality of the Sustainable Tacoma Commission was closer to the critique from Tritter and McCallum (2006) and De Santo (2016) in which institutionalized participation is actually not very powerful. While the public outcry over the methanol refinery was in process, the commission was discussing a plastic bag ordinance and making a recommendation to the City Council. Members of the commission were unaware of the refinery and had not been consulted. One stated:

We, as a commission, were debating whether we should have single-use plastic bags, which is a valid conversation. But we weren’t discussing [the plant]. It wasn’t even on our formal agenda in terms of sustainability. Is this good for Tacoma? And so, I mean, I found out about it through my Facebook account rather than my hat as a sustainability commissioner, which seems counterintuitive and so the concern... was, you know, the sustainability commission was almost like a greenwashing. It really felt like, you know, we are looking at single-use plastic bags when the largest methanol refinery in the world, the largest user of freshwater in Tacoma [was being built]. (former Sustainable Tacoma Commission member, personal communication, March 22, 2017)

The result was that, during the public meetings on the methanol refinery, two of the 11 Sustainable Tacoma Commission members resigned publicly during the meetings. To one of those that resigned, I posed a question about the decision-making power of the commission as follows:

Question: How much power does that commission have?

Former member: None. So it was an advisory commission for the City Council... the council members drafted a letter and approved at the meeting and then sent to the City Council. That was kind of it. That was as good as it got. (former Sustainable Tacoma Commission member, personal communication, March 22, 2017)

In short, the structures were willing to facilitate the flow of information, but resistant to sharing power in any meaningful form. In light of that, it is interesting to note that public agency did, in the end, demonstrate power, but not in a way intended by the institutions. The form of power exercised was to change the structures of the participation such that the participatory process “de facto” killed the project.

Limited scope of participation

Another way in which agency was influenced by structure was that structure limited the scope of the public’s participation. As mentioned earlier, many of those interviewed commented on the limits of the EIS public participation structure. Those that participated were successful in pushing the structures and norms around EIS to include an upstream and downstream analysis of the plant, but wanted more. Many of those who spoke at the meeting wanted to discuss the project's merits, but that was not the purpose

of the meeting. They wanted to discuss broader themes than just one refinery, yet the structures of participation were not designed to incorporate such comments.

Though the scope of the EIS was broadened to include upstream and downstream influences, the scope of the public participation was still limited to one project. This is something that those I interviewed spoke about regarding the structure. “Participation means involving the public, looking at the sorting, and making sure that all these little projects are not looked at in isolation,” one stated (grassroots organizer, personal communication, March 24, 2017). In agreement, the Environmental Outreach Coordinator said:

But these huge gaps exist on either side. You have to frack the natural gas. You have to transport that to Asia. Once you do that, you have to turn it back into plastics. Do we even want all those plastics? And that is the single biggest flaw in the SEPA review process, in my opinion. It is designed to look at a project with a box drawn around it and that is just not true, especially in the case of fossil fuel infrastructure. I think that there are practical reasons for that. It is hard to look at something comprehensively, but until we have a review process that does, I think that the progress we will make environmentally will be limited by it. I really do. (personal communication, March 9, 2017)

The former member of the sustainability commission had a similar comment, remarking that:

All the awesome public participation on the methanol, and now if you ask the port or the city, they say, like, well, that was closed. They drew a box around it.

What's not obvious is those concerns [that] were about the methanol are the same as the concerns about these other things. (former Sustainable Tacoma Commission member, personal communication, March 22 2017)

The union representative also commented on the fact that the process was devoid of any space where solutions were generated. He said:

So maybe the community could have come back with some solutions. Like maybe the community could have said, "We don't want that size." But just more solutions, not just "no." If we just work on a yes or no platform, this country won't move forward. (union representative, personal communication, March 27, 2017)

The facilitators of the process described such a structured process that did not include the aims above by saying:

The hardest thing is that the State Environmental Policy Act has a very structured process. My assignment was to come up with a scope of work. It was not to debate the merits of the project. I think I discharged what I did properly. We came up with a six- or eight-page scope of work. I think we heard people's comments and my director signed off on it. (Tacoma City staff, personal communication, February 21, 2017)

These comments show that the public was interested in larger issues such as dependence on fossil fuels and the use of the port to transport them. It also shows how the city was really only interested in the scope of the environmental impact statement that should be done.

Structuration Theory and the Tacoma Methanol Refinery

In light of my research, structuration EPP theory can be a useful lens for exploring the relationship between structures and agency. In particular, EPP structuration theory can help put more of an emphasis on the participants in public participation. It seems counterintuitive that a field that has “participation” in its very title would put so much emphasis on structure. It might have been useful to imagine if I had approached this research in another way. Had I adopted the framework used by Shepherd and Bowler (1997), which was discussed in the literature review, I would have analyzed how the institutions facilitate certain requirements of democracy theory such as inclusivity and the substantial nature of the review process. If I wanted to use organizational theory, I also could have used the best practices of Reed et al. (2008) to analyze the quality of the institution’s facilitation of the process. The end result of both would have been a list of suggestions about how the institutions could improve their participatory process.

Both of these approaches would have put the emphasis on institutions and the structures they create. In contrast, using a structuration theory lens helps to not only analyze the institutions and the structures they create, but to also view the agency and participants as being a crucial part of the discussion. Had I not used a structuration lens, I would not have seen how the agency exerted by participants influenced the process. I could have easily seen the failings of the participatory process, which is what much of the literature does, but to describe the power of participants to influence structure is an important component that structuration theory can add to the EPP field.

In my literature review, I catalogued how the conception of participation has evolved over time. I described how the participatory processes initially focused more on institutions and, over time, there was more inclusion of the participants. It makes sense that the field of environmental public participation studies would make a parallel conceptual shift from focusing on the institutions and structure to seeing a dynamic relationship between these and the agency exerted by the participants. Structuration theory can help do that.

Confidence

Overall, I have high confidence in the conclusions I have reached from my research, but I do have different levels of confidence depending upon the theme. In regards to looking at the relationship between agency and structure, I have little doubt that public agency created a new norm and inspired the port to change its transparency plans. My argument that public participation had changed social media usage and sensitivity deserves further research. In fact, researching social media's influence on public participation is becoming far more common and this case study could have focused on that alone.

One of my findings was that public participation changed the structures around public participation, especially by adding layers that caused NWIW to withdraw. While complex, I have high confidence in this finding. Large numbers of individuals requested upstream and downstream analysis, causing the city to expand the scope of the EIS, and then NWIW cited the length and cost of the EIS as its primary reason for withdrawing from the project. I would have liked to interview NWIW itself, but was unable to.

My other finding was that structuration theory is a useful lens in which to explore environmental public participation in that it puts greater emphasis on agency and its relationship with structure. One thought I have, though, is about the transferable nature of this to processes where individuals do not participate. In the case study, I researched large numbers of individuals who participated in a variety of ways, but what about EIS processes in which individuals do not participate? In my interview with the city official and staff member they implied that before the methanol refinery the city's organization of the various spaces was predicated on low public participation. One could say that these structures contracted to conform to low public participation. It would be interesting to analyze this in future research. Structuration theory is predicated on the idea that structures are created by individuals exerting agency many times or institutions creating rules.

Here then is the main caveat to my research, and it is the one most common for case studies: I did an in-depth analysis of one event. EIS processes differ greatly based on the nature of the project, the organizing institution, and the population that is participating. My research then needs to be thought of in light of the fact that other EIS processes are different.

Conclusion

There are both practical and academic results from my research. Practically, there is little doubt that public agency and participation influenced the structures of public participation and vice versa. Agency influenced the transparency plans and organization of public participation in multiple ways. It showed that public agency made institutions change their policies to be more inclusive of public participation. This case study focused on an example of a large amount of public participation and saw how it altered structure. Future research may look at how the lack of participation can similarly change structures. While it may be intuitive to think that low participation has negligible influence on structure that may not be the case. It is possible that low participation may cause structures to form that become barriers to public participation. In my research, the city staff and official both mentioned how institutions had expected little participation due to a previous lack of public input. They continued to say that this belief caused them to be ill-prepared for participation during the refinery debate.

The structures limited the participation of the public in both scope and power. In terms of academic contributions, this finding is not unique. Structure limiting agency is a common idea in the structure-versus-agency debate. What may require future research is the more defuse structures, like social norms, and their interactions with public agency. How does one define what a social norm is? How do you then analyze its interaction with structure? This research looked at one social norm and only the most blatant. There are subtle norms that could easily influence our relationship with public participation.

I found that structuration theory can help EPP scholars to better understand this dynamic relationship as opposed to primarily focusing on institutions and their structures. Had another framework been used, some of the nuances that were discovered could easily have been missed. Further research is needed to expand this initial framework. Future projects may analyze the relationship between structure and agency over large portions of time, as opposed to one event.

In closing, it might be useful to think about this question in my literature review: what does it mean to participate meaningfully? This research seems to suggest that meaningful participation changes the structures of society to become more just, democratic, and inclusive.

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