

An Exploration of Public Engagement and its Impact on Fighting Environmental Injustice

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On my honor as a University Student, I have neither given nor received unauthorized aid on this assignment as defined by the Honor Guidelines for Thesis-Related Assignments

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STS Research Paper

Introduction

Beginning in the 1950s and 1960s, the mainstream environmental movement exposed to the public the dangers posed by pollution, deforestation, and other forms of environmental degradation. Through this, people became aware of how these issues impacted their health and the environment. However, it was presumed that these problems impacted everyone equally. It was not until decades later that people began to realize and understand that environmental problems may impact certain locations and groups of people more than others. This paved way to the concept of environmental injustice which gained nationwide attention in the late 1980s (Maantay, 2002).

It has been found that those people who are unfairly impacted by environmental problems are often from disadvantaged and marginalized groups. These groups, who often are neglected due to a history of systemic oppression, are less prioritized by the government to solve the issues that they are facing. As a result, these groups are forced to work by themselves in order to gain awareness from the public mitigate the problems that they are experiencing. This research depicts how a failure of to explore the implications of public engagement and how that has affected the residents of Flint during the Flint Water Crisis.

Brief History of Environmental Injustice

It is important to analyze the data that has been gathered about the disproportionate number of environmental problems that marginalized groups have historically and currently face. A study conducted by the University of Colorado Law in 1992 analyzed 16 studies about the social distribution of environmental hazards in Washington D.C. and Houston, Texas (Mohai &

Bryant, 1992). It was indicated that there were clear class and racial biases in the distribution of environmental hazards, with racial biases determined to be stronger than class biases when determining the distribution of environmental hazards (Mohai & Bryant, 1992). These researchers also conducted their own study that assessed the social distribution of environmental hazards in Detroit and their findings were consistent with the pattern of findings from the 16 studies. It was found that minorities were four times more likely than whites to live within one mile of a commercial hazardous waste facility. They also found that race was a better predictor of residents' proximity to a waste facility than income (Mohai & Bryant, 1992).

After these initial studies were conducted, the researchers wanted to assess people's awareness of the environmental issues that their communities were facing. Using data taken from the University of Michigan's 1990 Detroit Area Study, researchers asked respondents to rate the quality of various neighborhood environmental attributes such as quality of the air and the quality of the drinking water. It was found that a wider margin of minorities than whites rated each of the attributes to be "poor" or "very poor" (Mohai & Bryant, 1992). Respondents were also asked to rate the seriousness of numerous neighborhood environmental problems such as noise level and litter or garbage in the neighborhood. Much like the findings from the other responses, minorities rated these as "very serious problems" by a much greater margin than whites (Mohai & Bryant, 1992).

These studies have provided strong evidence to explain many previous thoughts about the inequities of environmental problems. Environmental hazards are disproportionately affecting certain groups, with race being a huge determining factor. Not only this, minorities that are being affected are fully aware and greatly concerned about the environmental problem that are around their communities. Even though these studies were conducted in the early 1990s, the issues

experienced by these groups date back many years before, and these issues continue to persist today. These studies, alongside many others, proves that environmental injustices are present and that works needs to be done in order mitigate these issues from continuing on. These methods of response are where public engagement comes into the picture as one of the methods that are used by affected groups to enact change.

Community Activism in Environmental Research

Previous research about the use public engagement have already found established that can play a key role in the fight against environmental injustices. A study conducted in 2010 assessed the effectiveness of community engagement in addressing environmental injustice in underserved black communities in North Carolina (Wilson et al., 2010). This study discusses how municipal police powers have led to zoning and planning inequities, resulting in planning designations that create patterns of environmental inequality. This presents an unequal distribution of basic amenities such as sewer and water infrastructure and paved roads between different communities. The West End Revitalization Association (WERA), a community-based environmental justice organization located in Mebane, North Carolina, worked with various neighborhoods in order to address the issues. WERA's efforts aimed to increase the civic engagement among the residents through the use of administrative complaint process and develop and implementation of the community-owned and managed (COMR) approach. It was found that both of these methods led to positive changes in WERA neighborhoods. The use of the administrative complaint process resulted in the ability to increase the level of participation and support in making a complaint (Wilson et al., 2010). The use of the COMR process resulted in an increased amount of grassroots activism and leadership (Wilson et al., 2010).

Another study conducted in 2008 presented a cross-site case study of four community-based participatory research (CBPR) partnerships in Harlem, New York, South Los Angeles, California, the Tar Creek area of Oklahoma, and Tillery, North Carolina (Hinkler et al., 2008). These partnerships aimed to study and address the environmental injustices occurring in the areas previously mentioned. It was found that in each of the case studies, there was a strong commitment among community members to better their communities as well as others. The ability for community members to work together resulted in a stronger sense of community and equality (Hinkler et al., 2008). This stronger sense of community also allowed for greater policy making power as people became more knowledgeable about the problems they were facing and supportive of the policies that were being pushed to mitigate those issues. Community members were also found to strongly value the rights of all people who were experiencing environmental injustices, which broadened the focus of their work beyond their own communities (Hinkler et al., 2008).

Flint Water Crisis: Public Engagement and Trust

The Flint crisis began when Flint's water supply was changed to the Flint River as a cost-cutting measure even though the river water was not properly treated to guard against corrosion, which allowed lead and other contaminants to leach into residents' water. Residents began experiencing lead exposure, which can cause brain and nervous system damage to children.

Public engagement by the residents of Flint ultimately started the process of eventually getting their issues solved. However, public engagement takes on many forms, some of which may lead to conflicting interests between members and groups who are trying to solve the same problem. Exploring the differing effects of public engagement, the outcomes, and stakeholders should provide more knowledge and understanding about the situation.

The Flint Water Crisis began in 2014 and still continues today as more information emerges about community member's distrust with the government, lawsuits, and turmoil that occurred between participating parties. The distrust of the government amongst the community members began from the onset of the crisis. When the state government decided to change the city's water supply, residents became concerned. The water contained lead, making many people sick and leading to some deaths. The concerns expressed to the government were not met with even when community member LeeAnne Walters requested the city to conduct a test on her tap water where they detected dangerous levels of lead (Hohn, 2016). It wasn't until Marc Edwards, an environmental engineer and researcher from Virginia Tech, visited Flint to test the water alongside other community researchers, to which he also found dangerous levels of lead.

While Edwards work helped the community of Flint, Edwards had casted himself, or been casted by the news media, as Flint's saving grace (Hohn, 2016). By doing this, Edwards discredits the work and experiences of the Flint's community members who have been experiencing the issues for years. This is where public engagement results in ulterior motives. Separate parties, in this Edwards and the residents of Flint, are both trying to show the government that Flint's water is dangerous. However, that shared motives begins to stray away as community members work together so that everyone has safe and usable water, while Edwards works in order to show others that his research is important. As said by Irma Muñoz, the president of an advocacy group called Mujeres de la Tierra, "We don't want our day saved. We want to save our own day" (Hohn, 2016). This alternative motive by Edwards may further cause distrust among community members who already feel alienated in their fight against injustice. Community members are left asking themselves if they must continue on their fight by

themselves, or if there are people that are willing to help, can they trust their help and are they motivated by the right reasons.

This flawed relationship of trust between researcher and the public can also be seen between the public and the government. The reason why public engagement became such a crucial part in resolving the Flint Water Crisis is due to the government not holding themselves accountable for the situation, as well as not taking the residents' concerns seriously back in 2014 (Morckel & Terzano, 2018). The public's trust in Flint's government continuously decreased as time passed. More research was being done that validated the issues that the residents were experiencing, many of which were disregarded by government officials. Even as programs began to emerge in order to help the residents of Flint, trust remained a major issue. The government's perspective of helping solve the issues resulted by the crisis, even though it was extremely late, could not change the public's perspective of being left to die by their own government. As a result, this damaged trust could possibly effect government led recovery programs as Flint residents might be less likely to participate (Morckel & Terzano, 2018). Community members are left to wonder whether or not they should give their government another chance in order to save their city.

This dilemma of trust between scientists, government, and the public shows that public engagement is rooted in trust. Public engagement stems from an effected group's need for help as the government is not giving them the attention, they need in order to mitigate their problems. Groups must build trust with those who are helping them since they must be able to take in consideration and believe their lived experiences. If this trust is not present or is broken, then the effected group is placed back to where they began when no one was helping them in the first place.

Flint Water Crisis: Public Engagement and Perspectives

In response to the crisis, many individuals and groups provided help to the residents of Flint. However, the perspectives pertaining to why they wanted to help, as well as the ways in which they wanted to help, differed between them. By looking at the perspectives of researchers, local grassroots associations (GAs), and high-capacity nonprofits (HCNPs), we can discover how these perspectives differ and how that effects public engagement.

In the previous section, we discussed the relationship between researchers and their work with the residents of Flint. It is often that researchers visit communities with a prepared study design, seeking approval of their work rather than working with people that can provide input (Lewis & Sadler, 2021). While they may work with the public and discover valuable information and data that is useful for solving the public's issues, their perspective may come from a place of not prioritizing people that need help. Moreover, researchers are usually given grants that only last a few years, which are insufficient to addressing and solving public issues. After funding ends and researchers obtain their desired data, they move on, leaving unfinished work and a community that still needs help (Lewis & Sadler, 2021). The persepectives of these types of researchers presents a barrier to sustaining a long-term, committed realtiosnhip with the public. Researchers who are committed to the cause will continue to work with the public to solve their issues, even after funding has ended.

Local grassroots associations are nonhierarchical, community-based associations consisting of residents and activists who are social justice-focused. Their work focuses on addressing local social problems through political advocacy and social change (Nickels & Clark, 2019). During the Flint Water Crisis, GAs were concerned about the why and how of the water crisis (Nickels & Clark, 2019). They were seeing who in the government power structure is to

blame for the crisis, as well as asked for justice and punishment for the crimes that were being committed on them. Compared to HCNPs, GAs view the situation in the perspective of individuals who are aware of their limited power due to historical racial injustice and discrimination. Groups understood that the problems that each of them discovered were caused by a flawed system (Krings, Kornberg, & Lane, 2019). Race, class, and gender effected the way that different individuals experienced the crisis. Women, mostly women of color, led the movement in Flint, some of which were outspoken about the history of systemic racism in the city (Nickels & Clark, 2019). Other advocates expressed their concerns that the Flint community was not receiving the help they needed by those in power due to the high rate of poverty in the city (Nickels & Clark, 2019). Ultimately, multiple grassroots group joined together in order to create coalitions that could better leverage their concerns to the government. These groups allied themselves with national activists, government employees, academics, and scientists in order to “amass evidence of their greivances that would be deemed credible by government insitutions” (Krings, Kornberg, & Lane, 2019). These individuals provide a perspective of public engagement that comes from those that have been historically oppressed and have the desire to right the wrongs that have been done to them. Their perspectives of the situation provide a glimpse of how they view the government has historically ignored their needs, and that they must be proactive in addressing the root causes of the issues that they are experiencing in order to prevent them from continuing.

High-capacity nonprofits are hierarchical organizations that are embedded in the local, state, and regional political systems (Nickels & Clark, 2019). As a result of these connections and strong relationships with their communities, these organizations tend to have more influence when it comes to advocating for social change. These relationships that nonprofits have with

their communities may become even stronger and more important when local government becomes weak, like in Flint (Reckhow, Downey, Sapotichne, 2020). They become an extension of government activity that “may serve as a substitute for traditional government functions” (Reckhow, Downey, Sapotichne, 2020). Unlike the GAs, who discuss the need for intersectionality when dealing with the crisis, HCNPs create a narrative of equal suffering for all the residents of Flint (Nickels & Clark, 2019). This disregard for intersectionality and structural oppression about the issues posed by the crisis results in the colorblind racism of HCNPs. It should also be noted that while GAs focus on the root causes of the crisis, HCNPs are more concerned about finding solutions and moving forward since “the past is in the past” (Nickels & Clark, 2019). Many HCNPs are quick to discuss the technical solutions of the crisis, while avoiding discussion about the lack of democracy and communication with Flint that may have led to the crisis. This perspective of equal suffering greatly undermines those that have experienced social inequality in the face of the crisis. By disregarding the roots causes of the crisis, HCNPs fail to address who is accountable for the issues of Flint, the harmfulness of past policies that resulted in the crisis, and faulty power structures that resulted in the concerns of Flint residents to be ignored.

Discussion

Through the analysis of the different aspects of public engagement, we can now discuss the findings and how they have impacted the crisis. The relationship between the public and researchers can present very important relationships but also more problems. In the previous section we discussed the distrust that may occur when researchers are not fully committed in the cause for finding solutions to the crisis due to their own selfish attitudes and goals. This perspective of research creates further distrust among a community that already has little trust in

higher officials that are barely concerned about them and the issues that they are facing. Researchers who are more worried about defending their scientific work than helping the people are identical to the government not taking the concerns of their residents seriously. Even so, it is still important for the public to work with researchers in order to further prove to others the issues that they have been experiencing. This is not to say that people should not believe their lived experiences, but in a world that values data it is important to obtain clear evidence in order to definitely prove to others that the issues they are facing are real. In order for the public to better work with researchers, researchers should allow the public to lead the studies that are being conducted. In the Flint Water Crisis, the public should have the lead in experimental procedures, and the researchers should be present in order to guide the public through the work. If researchers were committed to the cause and they wanted to conduct their research for the sole reason of helping the public, they should be as accommodating as possible when working with the public. This allows the public, who have experienced the crisis and have a better understanding of the changes that need to be made in order to improve their lives, to have a better grasp of the work that is being done to solve their issues.

While the main goals of HCNPs are flawed, public engagement can benefit from the implementation of both GAs and HCNPs. GAs provide communities with better support groups in which residents are able to better connect with their communities and discuss issues through first-person experiences. Being able to talk to other individuals or groups that are experiencing the same issues you are experiencing can create immense support for issuing complaints for change. No longer do individuals feel as if they are left alone in their fight against injustice when there are many other people understanding your concerns. HCNPs, while flawed, can still be very beneficial through working with GAs in order to provide meaningful public engagement.

HCNPs should leverage their power within the local governments and push for changes that are set out by GA activists. This will allow GAs to pass information to a group that has more influential connections than them and a better chance of making their changes a reality. The “move forward” mindset of HCNPs can also be beneficial to working through the crisis. It is important to recognize that work can currently be done in response to the crisis and that it is a community effort to implement solutions. However, in order for this to work, HCNPs must recognize that suffering is not equal, and that intersectionality must be considered by discussing who has been affected and types of crisis response. There must also be discussion about the flawed structure of power that is present in the government that resulted in the crisis. Systemic racism and discrimination are some of the root causes of the Flint Water Crisis that must be addressed in order to hold people accountable for the issues that the public is facing. By acknowledging these issues, HCNPs and GAs will be able to simultaneously work with each other in creating relief responses that are beneficial to Flint residents. The possibility of these two groups working together may give hope to Flint residents as their cooperation may present a new partnership between the public and government powers.

Conclusion

Through this analysis of public engagement and its mechanisms, we can see many positives and negatives that may arise from its implementation. While it is greatly important for the public to be working with those that are finding ways to mitigate their issues, the public must be aware of the affected trust between them and researchers, as well as the different perspectives that individuals and groups may have when considering different solutions. Being aware of these problems and working around them may greatly improve the effectiveness of public engagement in fighting against environmental injustice.

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