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**Affluence, Risk, and Community Engagement:
The Case of Ascon and Huntington Beach**

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Abstract

This paper explores the engagement and mobilization of an affluent community in relation to a known environmental hazard. It extends our understanding of individual responses to environmental risk and provides at least one response to the long-unanswered question: how would affluent communities respond to hazardous sites? Despite the contention that these resource-rich communities will respond differently than the less affluent communities that traditionally have these environmental hazards, we find no meaningful difference in their mobilization and engagement. Despite their perception of risk associated with the Ascon landfill in Huntington Beach and relatively little trust in government to clean up the site, the community is largely unwilling to engage in activities related to site cleanup. This is an important contribution to our understanding of what generates individual action for environmental hazards and compels us to re-examine our understanding of what (if any) role socio-economic status plays in an individual's response.

Introduction

Since the proliferation of environmental justice literature in the 1990s, scholars have largely found that less affluent, minority communities are most likely to be geographically proximate to environmental hazards (Comacho 1998; Markham and Rufa 1997; Mohl 1995; Motavalli 1998; Schell and Tarbell 1998; Szasz and Meuser 1997; Thorpe 1996). They tend to be less politically powerful, have fewer resources, and lower levels of educational attainment, and thus unable to mobilize to prevent siting of a hazardous facility in their community. Although the decision to list a site on the Superfund National Priority List may have little to do with the status of the community, site cleanup is much faster in affluent, non-minority communities (Hird 1993). This suggests that there are disproportionate outcomes based on the socio-economic status of the community for remediating hazardous facilities (Schelly and Stretesky 2009). The overall findings of environmental justice studies suggest that affluent, white communities will somehow mobilize and use their political power to either prevent siting of a hazardous facility or speed up its remediation. The underlying causal mechanism that reduces environmental risks in these more affluent communities is assumed to be the power to mobilize against the threat. Of course, public engagement is important for environmental restoration regardless of demographics (Lauer et al. 2018).

We specifically selected a hazardous site in an affluent neighborhood in an attempt to respond to Hird's (1993, 333) proposition: "These empirical results attest to the fact that there is no clear theoretical explanation for how politically motivated communities will act in response to the identification of an abandoned hazardous waste site." On the one hand, environmental justice is about claim-making. If someone claims there is a risk or a threat that could disproportionately harm a particular population, that harm is perceived as a distributive injustice. On the other hand, someone else could claim that market forces drive economic geography related to the siting of industries with potential environmental risks. Walker (2012, 44) writes, "naming and giving meaning to any particular good or bad is a social process." Environmental justice inquiry has certainly discovered numerous instances of injustices that have disproportionately harmed minority, rural, and low-income populations, especially concerning industrial waste sites and landfills. A different perspective, however, suggests that "[i]nequalities in proximity to waste sites, if they exist, originate from the 'natural' functions of supply and demand and the impersonal workings of logic and market forces" (Noonan 2005, 1156). This study examines the second perspective, focusing on a unique industrial landfill site located adjacent to the beach in an affluent Southern California city. The history, geography, and industry of a community are important to understanding any landfill siting event, as are population demographics and the local economy.

Because environmental risks tend to be found in less affluent areas, education and awareness are largely thought to improve citizen perception of these risks, bringing them more in line with actual risks. Research in this area demonstrates a statistically significant relationship between the decrease of environmental risk and higher levels of income and education. For example, the closer a person lives to a hazardous waste site, the more likely they are to be a member of a minority group with lower levels of income and educational attainment (Mohai and Bryant 1992). In these same at-risk communities, those who tend to mobilize are largely "working class and lower middle-class activists, with a predominance of women" (Brown 1994).

Many environmental justice studies tend to generalize their findings for all populations, but we don't know much about affluent individuals since they are often underrepresented in most of these studies. Perhaps this is just a methodological problem. Unadjusted probability sampling

procedures will yield very few affluent respondents in any given sample given the rate of affluent respondents in proximity to environmental hazards. And if the sample is representative of a large population, less than 20 percent of the sample will be affluent—well below the number of respondents necessary to be confident with any inferences one may be inclined to make. Trying to find a hazardous facility near an affluent community significantly compounds this knowledge deficit. These constraints beg the question: if a hazardous facility were located in an affluent, largely non-minority community, would the community behave any differently than a less affluent, majority minority community? Would an affluent community, with higher rates of community engagement, take the time to engage the political process to make sure that a site would pose no increased risk to their health and safety? This study seeks to discover the answer to this question. Specifically, are affluent populations likely to engage for action or actually engage in mobilization against environmental risks in their communities?

This study surveys individuals in a largely white, affluent community near a hazardous waste facility to evaluate the assumption that more affluent, white communities mobilize for hazard remediation in their community. This study is similar to a number of studies, including Adeola (2000) and Konisky, Milyo, and Richardson (2008), but with significant modifications. In particular, we ask residents how likely they are to engage others in the community—friends and neighbors as well as governmental officials—in the face of the health and safety hazards posed by this site.

This paper proceeds by discussing the site of a potentially hazardous landfill located in an affluent Southern California community, including its historical background and contemporary remediation processes. Following this we discuss the literature relating to environmental justice for similar sites found in the United States, with a particular emphasis on how community members mobilize for hazard mitigation and restoration efforts. We then discuss several important aspects of community engagement for environmental justice, after which the discussion turns to the relationship between proximity to the hazardous site, perceptions of risk, knowledge of the site, and additional aspects of community engagement. We then move to a discussion of our unique study, its data collection strategy, and results that may have a profound impact on how we perceive mobilization against environmental injustices. We conclude with a discussion of potential avenues for future research on this topic.

Background of the Site

The site of interest for this study is the Ascon Landfill, located less than 0.4 miles from the Pacific Ocean in Huntington Beach, California. Huntington Beach is commonly known as *Surf City USA*, but it is also home to significant industrial activity, including oil production facilities, Boeing aircraft manufacturing (formerly McDonnell Douglas in Huntington Beach), and a United States Naval weapons depot. Because of its proximity to the ocean, great surfing conditions, and location in Orange County, Huntington Beach is a very expensive place to live. Even after the housing market crash in 2008, the median home price in the city in 2010 was \$574,305. Other data also demonstrate the level of affluence in the community. For example, the median household income in 2010 was \$83,644, while the mean household income was \$105,966. Over 55 percent of households in Huntington Beach had an income greater than \$75,000, while nearly 40 percent had an income greater than \$100,000. Given these household data, Huntington Beach does not fit the typical environmental justice study; its residents are clearly more affluent than those that are typically found near an industrial waste landfill site, if you measure affluence in

terms of household income or housing values (Hird 1993). Another significant difference in this study is that the town developed around the existing site; it was not ‘discovered,’ there were no ‘siting’ considerations, and the community went through no ‘transition’ period because of the site. A brief history of the town and the landfill follows.

History of Huntington Beach and the Ascon Landfill

Huntington Beach was incorporated in 1909 and experienced two major periods of growth. The first was in the 1920s with the discovery of oil. Oil production in Huntington Beach became so prolific that oil derricks dominated the beach landscape until the 1950s. The 38-acre Ascon Landfill started receiving oil production waste materials in the 1930s and continued to operate until the 1980s.¹ Initially, Ascon received mostly oil production waste materials, but over time it began accepting other hazardous materials such as chromic acid, sulfuric acid, aluminum slag, fuel oils, and styrene (California Department of Health Services 1991), and finally, inert construction debris. These waste items were dumped into unlined pits, which likely caused contamination of shallow groundwater resources, as well as surrounding saltwater wetlands. The contaminants also pose airborne health risks either from contaminated dust or direct blow-off, as some of the pits are not sealed from above. The oil boom had a significant effect on the city of Huntington Beach, doubling the population by 1940 to over 11,000 people and by 1970, the population had grown to over 115,000 people.² Given the importance of the industry for local jobs, the oil production received strong support from the community.

The Ascon Landfill closed in 1984 and was identified as a potential hazardous site by the late 1980s. One location on the site, KRIK well #80, was identified as a potential Superfund Site, but was never listed on the EPA National Priorities List (NPL). By 1991, the California Department of Health Services, Toxic Substance Control Program had assumed responsibility as the lead agency over the site and began site investigations in an effort to identify health risks, locate responsible parties, and begin remediation. From 1991 until 2010, the California Toxic Substance Control Program conducted significant public outreach through the school district, the fire department, and individual fliers so that the public would be aware of the situation and engage with the responsible parties and the state to help design the remediation project. While the CA Department of Toxic Substance Control retained oversight of the cleanup, the City’s planning commission played an active role in designing and approving the property owners’ remediation and final land use plans. In 2003, via a Consent Order, the cleanup process for the Ascon Landfill site began.³ The cleanup process included removing debris, grading, and installing storm water controls.⁴ There were two major cleanup efforts: the first was the Emergency Action in 2005-2006 and the second was the Interim Removal Measure from 2010-2011⁵. The focus of this paper is the Interim Removal Measure from 2010-2011. By this time, the composition of Huntington Beach was markedly different than when the site was initially created. In 2010, there were nearly 190,000 people residing in Huntington Beach. Unlike Adeola’s (2000) sample population—which was predominantly non-white, lower income, less educated, and in direct proximity to the landfill (some were literally on top of it)—our study location is predominantly white, high-

¹ <https://www.huntingtonbeachca.gov/about/history/>

² <http://www.census.gov/>

³ <http://www.ascon-hb.com/history.htm>

⁴ *ibid.*

⁵ *ibid.*

ly educated, and with above average household incomes. Of the 190,000 Huntington Beach residents, nearly 77 percent identify as white on the 2010 Decennial Census.

Additionally, the Ascon site was not a lurking site in which residents were unaware of the site's risks (Brown 1994). The site was in use during the community build out period and is located along a predominant roadway leading to the beach. This makes the site a good case for comparison to previous findings about how communities near hazardous facilities act against perceived risk. Transition arguments—that the site created a change in demographic composition, either in race or wealth—don't apply to the Ascon site. It is in an area adjacent to the beach, and property values have remained high throughout the time period under examination. In other words, the beach has likely mitigated the strength of any community transition effects.

As one can see, the site itself is typical of other industrial landfills found in many environmental justice studies; the city in which it is located is not. These similarities and differences are further explored below in a discussion of the literature related to environmental justice, environmental risk, and community mobilization efforts intended to mitigate and remediate environmental contaminants.

Literature Review

In this section we discuss several applicable themes from the environmental justice literature. These include proximity to the hazard site, one's trust in government, risk perceptions, actual knowledge of the hazardous site, and community engagement. Throughout the section we describe how affluence may influence each of these attributes.

Proximity

Few studies outside of the health sciences have attempted to understand how proximity to a hazard affects the community. Residents who are closest to an environmental risk will largely be the group that bears the majority of the health and safety impacts. It follows that, at some scale, there will be a relationship between how close residents are to a hazard, and how likely they are to engage or mobilize against the site. The risks from each site are different, and so proximity is a relative measure. For example, "proximate" to a landfill may be within a mile, whereas "proximate" to a coal-fired power plant may be within 10 miles, and "proximate" to a nuclear power station could be within 25 or 50 miles.

For those scholars who have addressed proximity to a site in their research, they have had mixed findings. As one might expect, individuals living adjacent to a NPL landfill felt more environmental concern, more danger, and more environmentally related health problems than those living in the same area but further from the landfill (Adeola 2000; Johnson, Brace, and Arce-neaux 2005). In short, "It can be concluded that the closer the residence of respondents to an NPL site, the lower the income and the higher the perceptions of diminution of environmental quality, seriousness of health and environmental problems, and other undesirable properties associated with [Locally Undesirable Land Uses]" (Adeola 2000).

Although we expect that an increase in proximity increases an individual's desire for policy action (Konisky, Milyo, and Richardson 2008), this increase in perceived risk does not necessarily translate into a demand for government action on the issue or at the site. One study, for example, identified people living near nuclear power plants who showed increased support for nuclear power, and citizens living near beaches who showed no decrease in support for offshore drilling

(Smith, 2002). Some of this unexpected relationship can be explained by controlling for trust in government (Konisky, Milyo, and Richardson 2008). If an individual has a high level of trust in government, they may feel more at ease near a hazardous facility, but as the level of trust in government's protective ability decreases, they may overestimate the risks of the site and the likelihood that they will be adversely affected.

Proximity can also be less about actual distance than perceived distance (Gould 1993). Those who routinely pass a site, even if they live further away from it, may feel more proximate than those who live in the immediate vicinity but cannot see the site. The main argument about proximity to a hazard is that if individuals feel proximate, they would be more willing to engage the community or the government for protection.

Trust in Government

Trust in government is directly related to risk perception and individual action (Hetherington 2004). If individuals feel that the government can be trusted, they are more likely to not engage in community or other efforts to address an environmental threat. Trust in government has a statistically significant positive effect on attitudes about government actions to address pollution and more trusting individuals are more favorable to government interventions to address problem (Konisky, Milyo, and Richardson 2008).

If individuals believe that the government cannot be trusted to either protect the public from an environmental threat or remediate an environmental problem, they may engage in oversight behavior or fully engage in any participative decision-making process (Bowler, Donovan, and Karp 2007). People may not want to participate but feel compelled to because of a lack of trust in government. "Sourness toward government does not stem from the fact that they want to be more involved, but from the fact that they feel as though they need to be involved even though they would rather not be." (Hibbing and Theiss-Morse 2002) Thus, suspicion of public officials engenders an obligation to keep watch over them.

Some argue that trust in government is related to their exposure to government service. Those who rely more on government services show an increase in trust in government. Additionally, individuals who have had been excluded from government processes may demonstrate a high level of distrust in government action. Where we see high levels of distrust in government and high levels of perceived risk, we expect to see individuals engage in oversight or other monitoring actions. This has even posed a significant problem for scholars of environmental justice. Survey respondents "expressed their anger and frustration about how government agencies such as [Department of Environmental Quality] and EPA and academic research institutions are studying them to death without providing needed solutions to their problems" (Adeola 2000).

Risk

It is assumed that if individuals perceive the site to be very threatening to their health or safety, they will be more likely to engage the community or the government for protection against the threat. Environmental conditions affect opinion and opinion affects policy responsiveness (Johnson, Brace, and Arceneaux 2005). Most of what we know about people's reactions to environmental hazards comes from the environmental justice literature, and its corresponding community types. A number of factors affect how environmental risks are perceived. It has been

shown that as the level of technical complexity of the problem increases, the issue becomes less salient to the public (Slovic 1987).

There is no doubt that humans are affected by living near hazardous facilities. Communities with such sites have higher concentrations of cancer, respiratory diseases, nervous disorders, and reproductive abnormalities (Adeola 1995; Novotny 1998). They also exhibit different attitudinal, perceptual, and adaptive behavioral tendencies concerning the environment and health. They tend to report more illnesses, lower community life satisfaction, and associate their somatic dysfunctions with poor environmental conditions (Adeola 2000). People living adjacent to a NPL landfill felt more environmental concern, more danger, and more environmentally related health problems than those living in the same area but further from the landfill. (Adeola 2000; Johnson, Brace, and Arceneaux 2005).

Risk is perceived differently across demographic variables and by cultures (Douglas & Wildavsky 1982). Individual perception of risk rarely reflects the actual risks associated with both the site, and broader environmental problems. Superfund and related toxic waste sites are perceived to have a higher risk than they actually do (EPA 1987; EPA 1990). They also appear to be more of a problem than larger scale, more imminent dangers (e.g. Ozone Depletion, Global Warming) (Hird 1993). This literature suggests that perceptions of risk rather than actual risk may impact community mobilization.

Knowledge of the Site

It is clear that in order to act against an environmental threat, individuals must first believe that it is a threat. In the simplest terms, awareness is a necessary, but not sufficient, condition for mobilization (Gould 1993). More importantly, environmental conditions affect public opinion (Johnson, Brace, and Arceneaux 2005). Citizens awareness and attitudes are not independent of their general knowledge. Specifically, when dealing with narrow issues (such as hazardous waste sites), attitudes are formulated and linked to specific policies and outcomes in the states (Goggin and Wlezein 1993; Mooney and Lee 2000; Norrander 2000; Putnam 2000; Johnson, Brace, and Arceneaux 2005). When public awareness and opinion are present, states and locales tend to be responsive to demands (Johnson, Brace, and Arceneaux 2005; Gallup and Rae 1940).

Additional Impacts of Community Engagement

Of course there are additional determinants for potential community engagement to affect perceptions and policy regarding environmental hazards and risks. The literature suggests that females tend to over-estimate risks whereas males are less concerned with risks (Blocker and Eckberg 1989; Bord and O'Connor 1992; Davidson and Freudenburg 1996; Douglas and Wildavsky 1982), so we would expect females to be more likely to mobilize in reaction to a perceived threat. The likelihood of mobilization is also likely related to an individual's level of education.

If information is available about the site, more educated communities could have an increased understanding and better estimation of the true risks of a hazardous site. Alternatively, those with higher educational achievement are less likely to live in a less affluent neighborhood. In at least one study, the level of education in a community with a hazardous facility was significantly lower than a comparable community without a hazardous site (Adeola 2000). Yet in another study, one of the two main determinants for political mobilization was a college education

(Hird 1993). Affluence is an important determinant of one's ability to impact surrounding communities and political systems (Schattschneider 1975).

Homeowners face different risks than non-homeowners when a hazardous facility is present in their community. Not only are they likely to suffer from decreased home values (Kohlhase 1991), but they are more likely to be affected by exposure to the hazards over time. Homeowners mobilize politically in the face of a siting decision, and they are more likely to be vigilant in ensuring that the site is remediated properly and in a timely manner (Hird 1993; Paston, Sadd, and Hipp 2001).

It is assumed that affluent people have more access to elected officials and the general political process than less affluent individuals. They are able to engage these officials through campaign donations, community events, and other high-status events. Affluent people are assumed to have a social network that can connect them to other people to 'get things done.' However, we don't understand how the affluent engage their community, or how they are motivated to action. It is commonly argued that the less affluent are targeted for siting of environmental hazards because they lack resources to fight such action. In short, affluent communities have a number of tools to fight a site that are not available to less affluent communities. They include access to politicians or interest groups (political power), access to government institutions or processes (government capacity or infrastructure), and financial backing to hire legal representation. If such actions are insufficient to fight the site, the affluent generally have to ability to move away from the site.

Data

While some studies of environmental justice have focused on geographical regions or neighborhoods as the unit of analysis, we move to the individual level in order to understand the determinants of civic engagement against for site remediation. In other words, rather than looking at the neighborhood distance from the site, we use survey-level data to identify the location of the respondent's house in relation to the site. We follow a similar method as Adeola (2000), by using individual survey data. We believe that one of the major issues with this previous work was that their measure of proximity appears problematic when you look at the mean distance of the respondent from the site (mean = 13.78 miles (25.99 s.d.)) With an n of 50, this means that the respondents were widely scattered both very close and very far from the site. The vast majority of our respondents ($n=430$) are within a five-mile radius of the site (Adeola 2000), and we do gather some respondents ($n=200$) from much further distances, but these results are noted separately. By using two distance measures, we can differentiate preferences of those very close from those further away, but still less than a mean of 14 miles from the site.

Survey and Sampling Method

We used a targeted sampling protocol to identify and sample individuals who lived at varying distances from the site. Rather than use a telephone or Internet-based survey, we conducted our survey using a paper-based instrument, so we could better control the survey distribution. We followed the suggestion of Bowen (2002): to better understand environmental justice, we should gather primary data specifically for that purpose, including spatial information.

We used a unique methodology to increase response rate, increase trust in the survey from potential respondents, and generate a representative sample of individuals in the neighborhoods

surrounding the site. Given the location of Edison High School and the service area of the school, we used high school students from six upper-level science classes to distribute the surveys. The logic behind this method is that the students would be nearly randomly distributed through the school's service area, which includes the Ascon site and most of the surrounding area. An additional benefit is that local student involvement in the sampling protocol for a school-based project added a level of credibility and trust that we could not have otherwise achieved. Adeola (2000), for example, had trust issues that made it difficult to start surveying. One community group in their study was particularly skeptical. He wrote, "They expressed their anger and frustration about how government agencies such as DEQ and EPA and academic research institutions are studying them to death without providing needed solutions to their problems." They also did not want to be guinea pigs. We attempted to leverage the good will of community members in helping out students in a class project.

Because distributing the survey was a critical and time-intensive process, each student was offered extra credit to participate in the distribution process, and an alternative assignment was given if a student did not want to – or was not allowed to – participate. They were given an hour of training on the purpose of the survey, the distribution method, and the importance of maintaining integrity in the research process. They were also instructed to not give more than one survey per household and they were required to distribute the surveys with one of their parents. Each student was given five surveys to distribute to their most immediately proximate neighbors. The students were told to go to the two or three houses on either side of their residence. We noted the location of each student's house in an enlarged map of the area and verified that there was no single area of the map that had an overabundance of students or was underrepresented. We asked each respondent to identify his or her housing block on the survey. Survey respondents were given the survey and allowed up to two days to complete the survey. Respondents completed the survey, placed it in an envelope, and sealed the envelope. Students returned to the respondent's house, picked up the sealed envelope, and then returned the envelope to the school. Parents were required to be present for the distribution and collection of the surveys. After the surveys were collected, we verified that the respondents were in the same neighborhood block as the student responsible for those five surveys.

We conducted a number of additional data verification procedures to ensure that our data were high quality. Our partner at the school (the teacher of the students) called each parent to verify that the student had followed the protocol in distributing the survey. If the parent could not verify that the student had performed the task properly, all of the survey responses distributed by that student were removed from the sample. As an additional check on the integrity of the data, each survey was manually entered into the dataset, and we conducted a check of responses by student to identify patterns of responses, similar handwriting styles or any other written indicators that would suggest that the student had completed the surveys themselves. A small number of surveys (94) were disqualified over concerns of data integrity. Most of these surveys were disqualified because the parent was not present when the student distributed the surveys, which was a violation of protocol. We also conducted a post-survey test to determine whether the respondents were oversampled in certain areas of the sampling area. Graphical inspection of the data indicates that the respondents were not clustered, but instead were reasonably well distributed through the area and at a variety of distances from the site. We distributed 1,000 surveys, of which 94 were disqualified. We received 620 completed surveys, which gave us a 68.4 percent response rate. Because proximity to the site is an important variable in our analysis, we discuss the responses from 344 individuals who reside within a three mile radius of the landfill site. For

these 344 individuals we were able to calculate their proximity to the site within 0.25 miles. The remaining individuals lived more than three miles away from the site and we were only able to calculate their proximity to the site within 1 mile increments. These respondents were removed from our analyses in order to preserve the precision of our proximity measure. Non-published analyses of the entire 620 respondents show no important or significant differences between them and the subset of 344 respondents analyzed here.

In comparison to other studies, these procedures allowed us to use survey-level data to identify the location of a respondent's house in relation to the site and determine a precise physical distance from the site. We believe that this helped us overcome some of the scale problems associated with similar environmental justice studies (Brown 1994).

Survey Findings

We asked respondents a number of questions regarding their neighborhood, relationships in the area, and knowledge of the site. Eighty-five percent of respondents had lived in the neighborhood for more than four years, with 50 percent of respondents having lived in their neighborhood for more than ten years. When asked about their level of satisfaction with the community, the mean score was 8.7 out of 10. Surprisingly, 91 percent reported having stable relationships with others in their community. Most respondents (69 percent) had a knowledge of the site, including six percent who can see it from their home. When asked about how often they passed the site, results varied widely. At the lowest end of the range, 27 percent of respondents reported that they almost never passed the site; the high end of the range, nearly 30 percent reported passing the site at least once per day.

Of primary concern was the respondent mobilization. For us, mobilization is the act of engaging the government or other citizens in an effort to use or demonstrate political power. We asked respondents a number of questions about their likelihood of mobilizing as well as actual mobilization activities (tables 1 and 2). The level of effort for each activity is progressive from the top to the bottom of the table, with higher levels of likelihood for the easier activities and lower levels of likelihood for more difficult activities (i.e. protest).

When asked about their likelihood of engaging in mobilization activities, the respondents demonstrated a statistically significant higher likelihood in mobilizing for general issues as compared to actions pertaining to the site. For example, when asked how likely they were to talk to their neighbors about any issue, the mean score was 7.4, but when asked how likely they were to complain to a neighbor about the site, the mean score was 4. Even where similar questions were much closer in mean score, such as attending community meetings, the confidence intervals failed to overlap. In short, respondents were more inclined to mobilize against a general issue than the Ascon site.

There is also a clear distinction between stating a likelihood of mobilizing and actual mobilization activities. Statements of likelihood to mobilize tend to overestimate mobilization activities, so we also asked respondents about actions they had actually undertaken against the site. A large number of respondents had participated in one of the five mobilization activities on the survey. Levels of participation in these activities seemingly correspond to the level of difficulty or commitment expected. For example, complaining to a neighbor, comparatively the easiest activity was reported by nearly 25 percent of the respondents, but participating in a protest at the site, the most uncomfortable and committed activity, was reported by only 1.5 percent of the respondents.

Table 1. Summary of responses about “how likely are you to...”.

	Mean	95% C.I.	
Speak with neighbors (any issue)	7.40	7.20	7.60
Complain to neighbors (Ascon)	4.03	3.81	4.25
Participate in community awareness activities (any issue)	5.17	4.95	5.38
Go to community center to discuss (any issue)	4.24	4.03	4.45
Attend community meetings (Ascon)	3.55	3.34	3.76
Organize community awareness activities (any issue)	3.05	2.87	3.24
Write a letter to a public official (any issue)	4.31	4.09	4.54
Comment on the EIR (Ascon)	3.56	3.35	3.78
Join a social movement group (any issue)	4.35	4.11	4.59
Join a group to fight the site (Ascon)	3.28	3.07	3.49
Attend a public protest (any issue)	3.74	3.52	3.96
Protest (Ascon)	3.07	2.87	3.27
Organize a public protest (any issue)	2.35	2.18	2.52

Note: Responses reported on a scale from 1-10 with 10 being most likely. Emphasized statements are general questions; emphasized (bold print) statements pertain to the site.

Table 2. Respondents’ actual mobilization events against the site (self-reported)

	Count	Percentage of Respondents
Complain about site to neighbors	152	24.5%
Attend community meetings	55	8.9%
Comment on EIR	46	7.4%
Join a group	18	2.9%
Protest	9	1.5%

While these results are not particularly revealing, they provide a baseline understanding of the dynamics of the community and their responses to a hazard. First, respondents were significantly less likely to mobilize against the site than a general issue, even when most respondents were aware of the site. Second, a large number of respondents engaged in some form of mobilization that varied with the level of effort and commitment required. Consistent with environmental justice literature discussed above, one could presume the affluent community of Huntington Beach, with its high levels of education, wealth, homeownership, social capital, and other demographics, residents’ likelihood to act would be somewhat consistent with their action. In other words, they have substantive and significant resources, indicated by those studying environmental justice, to mobilize for action. These characteristics are discussed below and shown in table 3. Note that the number of respondents in table 3 is fewer than those indicated in tables 1 and 2. When preparing the analysis described below, respondents with missing values for the variables indicated in table 3 were removed from the dataset. This left 344 respondents.

Table 3. Descriptive Statistics for the Study

Variable	Mean	S.D.	Range
Distance from Site (.25-mile increments)	4.94	2.70	1–12
Total Perceived Health Risks from Site	3.92	3.65	0–15
Knowledge of Site	0.73	0.44	0–1
Renter	0.15	0.35	0–1
Tenure in Neighborhood	4.03	1.19	1–5
Worry About the Site	6.92	2.53	0–10
Trust in Government to Clean Up Site	3.18	1.81	1–7
Gender (Female =1)	0.42	0.49	0–1
Education	3.72	0.96	1–6
Income	4.31	1.30	1–6
Political Affiliation (Democrat =1)	0.29	0.45	0–1
Belief that Ascon Pollution Affects Environment	6.84	2.88	1–10
Likely to Engage in Action for Ascon Site*	18.46	11.73	5–50
Actually Engaged in Action for Ascon Site*	0.56	0.92	0–5

Note: $n = 344$; *raw data are presented here but variables are standardized for analysis

Data and Analysis

Given the above discussion, we asked what activities a survey respondent is likely to do in relation to the Ascon landfill site—these are the items shown in bold typeface in table 1. Again, each of these five activities were presented to the respondent on a scale of one to ten, with ten indicating the highest likelihood to engage for that specific action. We summed these five questions to create a variable called *likely to engage in action for Ascon site*. Additionally, when focused on the actual activities in which respondents engaged related to the site, we created a variable called *actually engaged in action for Ascon site*. These two variables are constructed in different ways due to the different types of activities they represent. To facilitate comparison, they are standardized in the analysis presented below.

Next, we measured how close the surveyed household is from the landfill site in .25-mile radial increments. There is a mean distance of 1.25 miles between respondents and the residents. When we asked about perceived health risks from the site, providing the respondents with a battery of 15 different potential health risks associated with industrial landfills, the average response was approximately four ($s.d. = 3.7$). On a similar note, when asked whether they worry about the site on a 10-point scale, the average respondent indicates their level of worry at a seven ($s.d. = 2.5$). When asked whether they believe landfill pollution affects the environment, also on a 10-point scale, the average response was also close to seven ($s.d. = 2.9$).

We also asked several additional variables that reflect environmental justice literature. Nearly three-quarters of the respondents know about the site ($s.d. = 0.44$); 85% are homeowners ($s.d. = .35$); and the majority have lived in their neighborhood for nearly a decade. A preponderance

of our respondents have a baccalaureate degree and high levels of income. Our respondents are 42% female (*s.d.* = 0.49), and less than 30% (*s.d.* = 0.45) identify as Democrats. Then, on a ten-point scale, we ask if respondents believe that pollution from the landfill impacts the environment; the mean score of these responses is 6.84 (*s.d.* = 2.88.). Finally, we ask respondents, on a seven-point Likert scale, about their trust in the government to clean the Ascon landfill site; the mean score of these responses is 3.18 (*s.d.* = 1.81).

With the data described above, we construct two OLS regression models, as shown in table 4. We included a number of attitudinal and demographic variables from the academic literature that are associated or predict engagement, as discussed in the literature review above. These models show a) the respondents’ likely engagement in action for the Ascon site measured in .25-mile distance units from the site and b) actual engagement in action for Ascon site measured in .25-mile distance units from the site. This allows us to examine the difference between what people say—their intentions—and what they actually do.

The results of these models demonstrate that distance from the site matters: those who are closest to the site say they are more likely to mobilize for action (table 4a). Indeed, the marginal effects show a decrease in likelihood the farther away the respondent is from the site. Previous knowledge of the site, general worry about the site, and perceptions of risk have significant impact on a respondent’s likelihood to participate in mobilization against the site. These effects are moderated by one’s trust that the government—at whatever level—will eventually clean the site.

Table 4a. Likely to Engage for Action Against Action

Variable	Std. Coef.	Standard Error	P> t
Distance from Site (.25 mile)	-0.20	0.07	.007***
Perceived Health Risks of Site	-0.02	0.01	.198
Previous Knowledge of Site	0.36	0.11	.001***
Renter	-0.16	0.15	.306
Tenure in Neighborhood	-0.01	0.04	.860
Worry about Site	0.11	0.02	.000***
Belief that Ascon Pollution Affects Environment	0.09	0.02	.000***
Trust Government to Clean Site	-0.04	0.03	.175
Gender (Female =1)	-0.01	0.10	.936
Education	-0.01	0.54	.929
Income	-0.06	0.04	.181
Political Party Affiliation (Democrat =1)	-0.11	0.11	.841
Constant	-0.84	0.39	.003***
F(12, 331) = 9.91***			

Note: Coefficients are standardized for analysis; *n*=344; R²=0.26

Turning to table 4b, we look at mobilization activities a respondent has taken against the site. Again, distance from the site matters, with those living closer more likely to take action. This effect is significant (at $p < 0.05$) up to nine distance units from the site, or 2.25 miles. Those who have engaged significantly perceive there to be health risks associated with the site and they worry about the site’s environmental impact. In addition, Democrats tended to mobilize less than any other political affiliation. While the political affiliation variable is interesting on its face, the study location is located in a heavily Republican-leaning part of Orange County, within a state with an increasing number of ‘decline to state’ voters. In addition, while notable, these last two variables barely meet the level for statistical significance.

Table 4b. Actual Engagement Activities for Action Against Action

Variable	Std. Coef.	Standard Error	P> t
Distance from Site (.25 mile)	-0.39	0.09	.000***
Perceived Health Risks of Site	0.03	0.02	.070*
Previous Knowledge of Site	0.23	0.12	.050*
Renter	-0.21	0.16	.194
Tenure in Neighborhood	0.02	0.04	.665
Worry about Site	0.06	0.02	.020**
Belief that Ascon Pollution Affects Environment	0.04	0.03	.089*
Trust Government to Clean Site	0.01	0.03	.990
Gender (Female =1)	-0.16	0.10	.116
Education	0.05	0.06	.389
Income	-0.03	0.04	.503
Political Party Affiliation (Democrat =1)	-0.24	0.11	.068*
Constant	-0.43	0.41	.289
F(12, 331) = 6.46***			

Note: $n = 344$; Coefficients are standardized for analysis; $R^2 = .19$

Discussion

From this analysis, it appears that despite what we would expect, there are not meaningful differences between the ways that this more affluent sample demonstrated engagement and mobilization in comparison to previous study samples with less affluent populations. Instead, proximity continues to be the most significant factor for engagement. Individuals living closer to the site report greater concerns about environmental effects, demonstrate a greater likelihood of mobilization, and have a higher participation in actual mobilization against the site. This study also provides more definitive evidence about the effects of proximity given that the respondents lived much closer to the actual site in this study than respondents in previous studies (Adeola 2000).

There is also a significant difference between the extent to which individuals claim they will engage with their community (particularly in reference to site related issues) and the extent to

which they actually engage. Although we cannot be certain what causes this discrepancy, there are some reasonable inferences that can be made. The most likely explanation is free riding; if someone feels that someone else will act on their behalf, then they may be less likely to directly participate (Olsen 1965). 25% of the sample said that they complained to neighbors, but only about 9% of the sample actually attended one of the community meetings (an activity with a relatively small commitment). Perhaps many of the respondents complained to their neighbors with the expectation that one of them would actually attend a meeting or speak up on their behalf. This lack of participation is even more surprising given the relatively low level of trust in government for government in general, but also for this specific site cleanup. If people exhibit low levels of trust in government, it would be logical to conclude that they will be even more mobilized to deal with the hazard to ensure that the cleanup is done correctly and expeditiously. Despite this low level of trust, less than 10% of respondents participated in any of the mobilization activities (other than complaining to a neighbor).

Conclusion

This study forces us to re-examine some long-held assumptions about how people from different socio-economic backgrounds will behave when faced with environmental hazards near their home. The Ascon site does not fit the stereotypical environmental justice study, but there are similar patterns in behavior to prior studies. It is logical to posit, as the environmental justice literature has, that a group of people who are more educated and wealthier will have the capacity to be more engaged in cleanup related issues and use their available resources to encourage faster remediation. Instead, we find that proximity to the site is the driving force for engagement and regardless of capacity or resources, people tend to be relatively disengaged from the site cleanup process, even when they perceive some risk from the site.

Further research should examine other sites in more affluent communities to determine whether or not the community reaction in this case is unusual or is prevalent in other areas. Also, given that the focus of this site was the cleanup process and not the initial siting, it would be interesting to see what the community mobilization would look like for a potential siting in a more affluent area.

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