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PROCESS IS JUST AS CRITICAL AS RESULTS: USING COMMUNITY-BASED PARTICIPATORY  
RESEARCH TO UNITE ENVIRONMENTAL JUSTICE AND SUSTAINABILITY

BY  
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THESIS

Submitted in partial fulfillment of the requirements  
for the degree of Master of Science in Natural Resources and Environmental Sciences  
in the Graduate College of the University of Illinois Urbana-Champaign, 2016

Urbana, Illinois

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## **Abstract**

Environmental justice and sustainability are two critically important goals often prioritized by NGOs, planners, government agencies, and grassroots groups. Although complementary, these two bodies of literature are rarely integrated. This thesis examines the barriers that have impeded greater cohesion of environmental justice and sustainability efforts. To do this, I drew on community-based participatory research methods to elicit stakeholder perspectives on a local waterway remediation project in Milwaukee, WI. The objectives of my thesis were twofold: 1) conduct interviews to understand stakeholders' definitions of injustice, as well as views on how injustice was created and can be remedied; and 2) discover the challenges and ethical dilemmas of community-based participatory research methods to increase the likelihood of win-win scenarios for communities, practitioners, and researchers. To understand how urban sustainability efforts were divisive and/or brought environmental justice and sustainability initiatives to the fore, I used a theoretical lens grounded in a theory of change. This enabled a critical and reflexive research process for overcoming hurdles and benefiting stakeholders and the ecosystems on which they rely.

## Acknowledgments

I would like to gratefully thank my advisor, Dr. Bethany Cutts, for her invaluable support throughout my graduate studies. I could not have asked for a better person to work with and learn from. Your feedback constantly challenged me to push my thinking and writing to the next level.

I would also like to extend the warmest thanks to my committee members Dr. Andrew Greenlee, Caitlin Nigrelli, and Dr. Carena J van Riper for their commitment to this research. Their feedback helped improve the quality and applicability of this project to diverse bodies of scholarship and practitioners.

I must also express my gratitude to family and friends who have provided support for the past two years. Your constant encouragement kept me afloat during the toughest times.

I gratefully acknowledge funding from Illinois-Indiana Sea Grant, grant no. NA14OAR4170095 “Mapping Social Vulnerability in EPA-designated Areas of Concern” and the University of Illinois Urbana-Champaign Graduate College Focal Point Initiative “Urban Environmental Equity”.

This accomplishment would not have been possible without any of the aforementioned.

THANK YOU.

Kaitlyn

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## CHAPTER 1

### Introduction

Sustainability and environmental justice are critical, but often separate initiatives undertaken by NGOs, planners, government agencies, and grassroots groups (Agyeman, 2005; Krakoff, 2015; Pearsall, 2010). Sustainability initiatives focus on forward-thinking “green” solutions aimed at creating safe, healthy and long-lasting amenities and lifestyle choices (Anguelovski, 2015; Pearsall, 2010). In contrast, environmental justice initiatives respond to uneven distribution of benefits and burdens across a community – including pollution exposure, accessibility to certain amenities, or siting of unwanted facilities (Gibson-Wood & Wakefield, 2013; McClintock, 2015; Miller, et al., 2011). While sustainability and environmental justice accomplish important goals, they can be more powerful when combined. This combination, called “just sustainability,” suggests that cohesive efforts between environmental justice and sustainability can lead to productive and successful efforts toward equitable and sustainable communities for all people (Agyeman & Evans, 2003; Hess & Winner, 2007). Many urban areas deal with these competing initiatives, seen through tensions between race, class, access, gentrification, revitalization, development, and health disparities. These pressures leave urban areas a relevant and critical context to examine the potential for just sustainability.

Using the just sustainability lens requires in-depth insight into people's attitudes, experiences, and thoughts on various development efforts. Stakeholder interviews and the process of implementing community-based participatory research (CBPR) methods provides unique insight into Milwaukee, Wisconsin's progress toward just sustainability. CBPR and the CVM in particular respond to the insufficiencies in traditional public participation and engagement practices. Many of the traditional methods, such as public meetings or comment periods, do not allow for conversation and dialogue between the community members and decision makers. In addition, the CVM and CBPR places importance on the iterative process and the benefits inherent to more widespread inclusion. This form of research benefits the community both in the process and the results. This lens helps frame the array of stakeholder perceptions of environmental and social injustices in the city and track the processes behind decision-making. Examining the research process can also highlight where research efforts can improve to bring mutual benefit to the community, practitioners, and researchers. Milwaukee is situated at a unique point – it is considered one of the US's most segregated metropolitan areas, yet also one of the few successful and thriving post-rust belt cities. This context brings environmental

justice and sustainability issues to the surface, allowing me to draw relevant conclusions for Milwaukee and contribute to broader urban sustainability and CBPR literature.

## Overview & Objectives

In many urban areas, there are ongoing initiatives to improve sustainability. Often, undoing past environmental harms are part of this effort. This thesis research examines the implications of CBPR methods and results in Milwaukee, Wisconsin. The implementation of a modified version of the Community Voice Method (CVM) (Cumming & Norwood, 2012) yielded a rich body of stakeholder interview data and presented opportunities to address challenges in the CBPR process. I set out to examine the question: **What can stakeholder perspectives on environmental remediation projects reveal about progress toward just sustainability in an urban context?**

Stakeholder interviews and process-based lessons-learned address this question through the following specific objectives:

1. Parsing stakeholder perceptions of environmental injustices and their *theories of change* between and within stakeholder groups shows where justice and sustainability efforts may be competing or cohesive.
2. Highlighting process-based challenges and ethical dilemmas in community-based participatory research endeavors through the implementation video-based CBPR methods.

There are a multitude of perceptions and ways of thinking that may conflict or complement one another; particularly evident in the many ways urban sustainability and justice initiatives are enacted. Thinking at different scales, perceptions of injustice, and the remedies to such problems are often conflicting, possibly leading to many well-intentioned efforts working past one another rather than together. Through an inductive research process, we identified the numerous ways in which stakeholders construct a *theory of change*, or the underlying mental model for expectations of change toward justice and sustainability (Hornik, et al., 2016). Chapter 2 of this thesis uncovers differences and similarities in stakeholder theories of change to begin bridging the gap between environmental justice and sustainability initiatives that are concurrent but not yet cohesive.

Just sustainability places an emphasis on community-based decision making, which requires strong community capacity, trust within the community, and the ability to productively tackle challenges now and into the future (Agyeman, 2008). These are primary goals for the CVM and this research in Milwaukee. However, environmental social science research does not happen in isolation; there are numerous factors that impact the research flow and timeline that must be addressed and accommodated in order to move forward in the most productive way. We learned a great deal not only through interview analysis but also through the process and the struggles that came with CBPR. Participant recruitment and conflicting and controversial perceptions slowed the progression of this study but yielded valuable internal discussion about racial disparities in urban areas allowing us to be critical of our role in the community and research process. Working through these hurdles ensures the greatest mutual benefit for communities, practitioners, and researchers alike. Chapter 3 of this thesis discusses these challenges, makes recommendations for the next steps for the Urban Environmental Equity project, and sheds light on obstacles throughout CBPR that are less frequently mentioned in the literature.

If urban sustainability efforts seek to successfully embrace the triple bottom line of economic development, environmental protection, and social equity, we need to make strides in closing the gap between research and implementation where there is a particular lag in social equity considerations. Pairing these two thesis chapters helps to bring social equity into the sustainability picture, which is so often dominated by economic or environmental priorities. Understanding stakeholder theories of change and the hurdles that come with CBPR shows just how complicated stakeholder solutions and research efforts intended to improve environmental and social conditions can be. There is certainly not a “one size fits all” approach to uplifting social equity concerns, but this paper helps bring incremental understanding to barriers between environmental justice and sustainability and provides useful recommendations for the continuation of this research project and future CBPR endeavors.



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## CHAPTER 2

### Community Theories of Change: Linking Environmental Justice to Sustainability through Stakeholder Perceptions in Milwaukee (WI, USA)<sup>1</sup>

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Academic Editors: Jayajit Chakraborty, Sara E. Grineski and Timothy W. Collins

Received: 1 July 2016; Accepted: 26 September 2016; Published: 30 September 2016

**Abstract:** Environmental justice and sustainability are compatible lenses, yet action toward equity is often missing from urban sustainability initiatives. This study aims to assess the cohesion of these frameworks in practice. To do this, we parse individuals' theories of change, or how they identify and propose to resolve environmental injustices in the pursuit of sustainability. We posit that these theories of change are comprised of three main components: (1) perceived environmental benefits and burdens, (2) the causal pathways of environmental and social injustice, and (3) visions for positive change. Drawing from 35 stakeholder interviews in Milwaukee (Wisconsin, USA) we examine individual and institutional perspectives on environmental and social change and their links to the production of injustice. Our findings reveal that participants do not distinguish between environmental and social injustices. Instead, both social and environmental factors are implicated in injustice. Furthermore, we identify two mental maps for how social and economic change reproduce injustice. These findings suggest the need to reorient how urban injustice is considered and make efforts to acknowledge how a diversity of operational theories of change could either be divisive or could bring environmental justice and sustainability initiatives together.

**Keywords:** production of injustice; socioecological interactions; perceptions; interviews

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## 1. Introduction

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Hornik, K.; Cutts, B.; Greenlee, A. Community Theories of Change: Linking Environmental Justice to Sustainability through Stakeholder Perceptions in Milwaukee (WI, USA). *Int. J. Environ. Res. Public Health* **2016**, *13*, 979.

As environmental justice has become an institutional imperative, there is a greater need to examine how diverse stakeholder groups construct *theories of change*. For the purposes of this paper, we define theory of change as the underlying mental model for expectations of change toward justice and sustainability. To operationalize these theories, stakeholders define concern for environmental injustices, the processes that they see as contributing to injustice, and resources that can be brought to bear in order to achieve the changes they articulate. Our goal is to draw out relevant elements of different theories and to highlight similarities and differences between them [1].

### *1.1. Background*

The environmental justice movement and research agenda has a long history of uncovering distributional and procedural injustices in urban areas [2–4]. Environmental justice activism has focused on resisting the siting of hazardous facilities in low-income communities of color and on efforts to remediate, relocate, or otherwise compensate communities affected by pollution [5–8]. Consequently, there is an abundant body of literature that has examined the effectiveness and consequences of social movement action [6–10]. Over time, activism for environmental justice has given way to institutional imperatives to consider environmental (in)justice in environmental planning efforts. For instance, at the federal level, the U.S. Department of Housing and Urban Development in late 2015 adopted a new set of standards supporting its new initiative of Affirmatively Furthering Fair Housing. While this determination is focused on housing interventions involving federal dollars, the spatial distribution of exposure to environmental pollutants is now included as a measure of housing equity that will be implemented nationwide. In many instances, the institutionalization of environmental justice, which includes the creation of formal policies as well as the transition of environmental justice organizations from political groups to official not-for-profit status, has shifted how justice is defined and enacted [11,12]. Thus, although no enforceable environmental justice standards exist, Executive Order 12898 [13] and subsequent federal and state-level strategic actions have set an expectation that environmental decisions be made using fair processes that recognize the needs of low-income communities and racial and ethnic minorities, and that prevent new and remediate existing environmental injustices [14,15].

These policy shifts often adopt a working definition of justice that diverges from the philosophically liberal concepts of justice that inspire social movement action. Research has shown that governmental actions conceived of in relation to environmental justice are more likely to support a libertarian concept of justice that ascribes responsibility for environmental health protections to individuals [16,17]. Differences in operational definitions of justice between environmental justice activists, government

agents, and other stakeholders are likely to change over time and between contexts. Measures of justice and policy-based remedies are likely to diverge from the philosophical principles from which they were derived. In addition, as environmental justice increasingly becomes codified within federal, state, and local policies, complex interactions are likely to result which merit additional attention and analysis [16,17].

Part of the challenge of operationalizing and implementing principles of sustainability in practice is the loose and widely interpreted nature of the concept. It is generally accepted that sustainability honors three core tenets (environmental protection, economic development, and social equity) while also thinking about how to protect the viability of these tenets for future generations [18]. However, the implementation of sustainability initiatives vis-à-vis design and policy shows that these three qualities are not always equally upheld, in fact, one would be hard pressed to find a project that equally engages all three. Principles of sustainability create the potential to link environmental improvements and economic growth with longstanding concerns regarding lagging social equity [19,20]. The road to implementing sustainable policy is filled with “tautological traps” [21], and social equity goals are often subordinated to more easily measured economic and environmental goals [22].

Previous scholarship highlights three inherent conflicts that exist within the pursuit of urban-scale sustainability interventions—a property conflict, a resource conflict, and a development conflict [23]. First, the property conflict is manifested in regards to who should establish and maintain control of how benefits of sustainable development are allocated within space. Should existing residents be guaranteed benefits associated with sustainable development or should market forces determine how benefits are allocated? In practice this conflict is often shown within price premiums for land and property that may currently, or in the future, be managed with sustainable development principles. Such improvements can essentially price existing stakeholders out of accessing benefits in their communities [24,25]. Second, the resource conflict is demonstrated through tensions regarding how to value the natural environment—with respect to development, does it have a value in and of itself, or should the value of natural resources be viewed as a substrate for urban development? Essentially, this conflict pits the conservation of nature against the prospective benefits of economic growth. Third, the development conflict embodies questions of whether development projects can adequately balance social equity and environmental concerns at the same time. While theories of environmental justice would suggest that the social and environmental landscapes are inextricably linked, in practice, these environments are often viewed as separate for the purposes of justifying and implementing development interventions. A recent emphasis on establishing principles for livability—how principles of sustainability are experienced within everyday

life and everyday interactions with the natural, built, and social environment—points to another value conflict where the needs and expectations of past users of space are pitted against those anticipated to be demanded by future users [26]. The concept of “just sustainability” coined by Agyeman, Bullard, and Evans [27,28], emphasizes the importance of incorporating social improvements to sustainability projects to help bridge the gap between environmental justice and sustainability with the unified goal of creating “healthy human habitats”.

The conflicts described above help us to understand why the implementation of sustainable development and environmental justice often remain disconnected. How stakeholders perceive injustice to be created or produced is just as important as what those injustices are understood to be, though the former is a seldom-studied factor in environmental justice literature. Scholars concerned with the implementation of sustainability goals within urban contexts are increasingly looking at the roles which institutional and community culture play in cumulatively influencing social and economic systems across multiple geographic scales [29]. This approach acknowledges the importance of interactions across scales and amongst actors in everyday environments to produce social change:

Social change, once viewed as the introduction of new technologies to “innovators” or “opinion leaders” and diffused to others is now seen as stemming from the interaction of “agents”, that is individuals with agency, interaction across boundaries to solve ongoing problems at the local level ([28], p. 247).

At the macro level, policy and regulatory institutions devise and provide resources for frameworks for change. At the meso level, organizations articulate their stake in changes and use their power to advocate for preferred alternatives and for the redistribution of benefits towards their stakeholders. At the micro level, individual community members make decisions and adapt their everyday activities in response to change. Taken together, these multilevel dynamic social systems involve both individuals and institutions interacting as positional stakeholders [30,31] across all of these levels to produce and respond to change and form a dynamic, complex, and adaptive system [32,33]. This approach suggests that in order to deal with inherent sustainability conflicts, decision-making must be integrated across scales and amongst diverse stakeholders in order to develop locally-mediated interventions and frameworks for mitigating externalities [29]. Coping with the potential trauma of change—the restructuring of physical, social, and economic benefits and burdens—across multiple levels and amongst diverse stakeholders therefore requires a more intimate understanding of how individuals and institutions perceive the nature of change and its potential to unmake or reproduce perceived forms of injustice. Many environmental improvement efforts, such as waterway remediations, are assumed to bring social and economic changes as an inherent byproduct. However, the perceived ability of such a project to better the surrounding social and economic milieu will likely differ between stakeholders.

## 1.2. Characterizing Theories of Change

Existing research is focused on perceptions of particular outcomes or processes involved in environmental injustice [34,35]. Our study takes the next step in identifying how community members believe positive change should be made to relieve injustices by examining differences in their *theories of change*.

Stakeholders define what is considered ethical and equitable in different ways, but in most cases, their ethics regards a personal view and equity refers to the distribution and access to resources and services [35]. This variation in what people believe constitutes an environmental benefit or burden may be where this divergence begins. Given differences in perception, the problem with ethical policy-making may be due to conflicts in what is perceived as ethical, just, or fair decision-making [35] and what should constitute ethical priorities and actions. These perceptions can differ from person to person and from community to community, leading to differing and conflicting concepts of what actions are most ethical and appropriate [36]. Variation in how people envision change occurring—whether it be through different individuals, agencies, policies, or other mechanisms—offers insight into potential conflicts and barriers to achieving both just and sustainable cities [37]. Conflicting views about what should change, who should initiate change, and how they should do it could illuminate this gap in sustainability that ignores injustice.

Simply identifying environmental benefits and burdens requires flexibility given that each case of equity typically has a different priority [35]. For example, one community's focus might be public transportation whereas another's might be legacy industrial toxins contaminating local sediments. For these reasons, recognizing the array of equity priorities at play is an important first step in understanding theories of change. Differences in scale can result in conflict over what is considered an ethical policy [34]. Beyond perceptions of inequity, it is important to consider perceptions of how injustice is created and what can be done to overcome environmental injustice. This is necessary to mediate potential conflicts that may occur in pursuit of urban justice and sustainability, as it is defined for multiple stakeholders [29].

## 2. Case Study—Milwaukee, Wisconsin

To understand how people operationalize the connection between environmental justice and sustainability, we analyze stakeholder perspectives in Milwaukee, WI, USA. We chose to engage with interview participants specifically around water resources. Water provided a useful template because it is central to both environmental injustice and sustainability in Milwaukee. Current work to clean up water

pollution [38] provided an opportunity to engage with government agencies, non-profit organizations, and diverse citizen stakeholders thinking about environmental improvements in the context of larger social and ecological change.

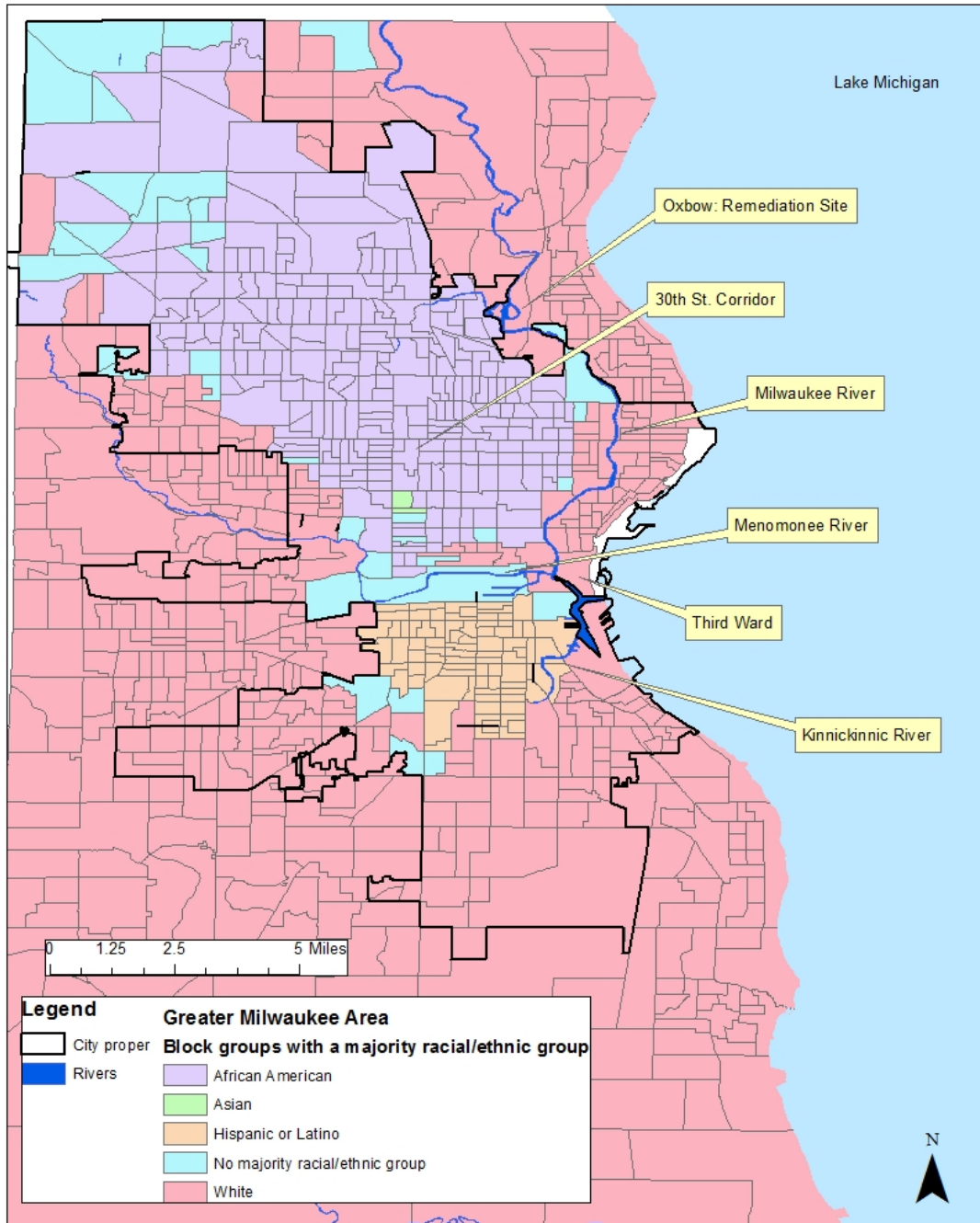
Located at the intersection of the Milwaukee, Kinnickinnic, and Menomonee Rivers and the shore of Lake Michigan (Figure 2.1), access to navigable waterways played a large role in Milwaukee's growth as a Euro-American city, while also setting the template for patterns of racial segregation and pollution. The Milwaukee River served as a dividing line, separating sections of the city originally settled by French colonial traders who intentionally misaligned the streets to inhibit transportation of goods and people [39]. The misaligned streets, divided by the river, paved the way for discriminatory redlining resulting in heated civil rights demonstrations through the 1960s [40]. Subsequent deindustrialization in combination with "suburban supremacy" further entrenched racial disparities in terms of who bore the environmental burden of water pollution generated by the (now closed) factories [39]. Through the 1980's the construction of divisive freeways, relatively unsuccessful urban renewal projects, white flight, suburban sprawl, and other issues common to Great Lakes Rust Belt cities further entrenched environmental injustices in Milwaukee [39,41]. Human and environmental health have been seriously threatened from industrial disinvestment, legacy pollutants, and antiquated infrastructure, all contributing to the stark socioeconomic disparities throughout the city [42,43].

With support from federal, state, and local governments, efforts to remove contaminants and restore aquatic habitat are now at the center of urban sustainability initiatives in Milwaukee. Presently, the city is undergoing robust revitalization efforts with a focus on waterways as an amenity rather than for industrial dumping or transportation. Revitalization efforts are most evident throughout the Third Ward (Figure 1) and other industrial neighborhoods undergoing commercialization with boutiques, waterfront cafes, and luxury lofted apartments [44]. Rapid revitalization efforts by the city bring opportunities to consider historical patterns of environmental injustice in the context of efforts toward a new "sustainable" economy and a view of water resources as amenities. While water-centered sustainability initiatives have been successful in some areas, Milwaukee still faces deeper politicized issues including funding for infrastructure and transportation improvements, social and economic inequality, racial segregation, high levels of concentrated poverty, and intense competition with other Great Lakes cities [39,41].

### *Ethical Statement*

All subjects gave their informed consent for inclusion before they participated in the study. The study was conducted in accordance with the Declaration of Helsinki, and the protocol was approved by the Institutional Review Board of the University of Illinois Urbana-Champaign (IRB #14431).

### Racial/Ethnic distribution in Milwaukee, WI



**Figure 2.1.** Shows the racial and ethnic makeup by census block group. To be considered a majority, over 50% of the population must be represented by one racial/ethnic group.



### 3. Methods

We conducted a series of semi-structured interviews with stakeholders associated with a stream remediation project in Milwaukee, WI, USA. The goal of the interview questions was to elicit the subject’s personal experiences and knowledge related to their theory of change (Table 2.1). Interviewing took place from February 2014 to February 2015.

**Table 2.1.** Interview questions.

Topic	Question
Background	How would you define the physical boundaries of your local community?
Environmental burdens and benefits	How would you rate the quality of the environment in this area? What contributes to it? What detracts from it? How would you describe the social groups that are most vulnerable in relation to the environment?
Production of injustice	How would you describe the characteristics of (the local community)? What things have you seen change in (this community)? How did these changes happen? What types of problems has this community faced in the past? How has it dealt with those problems?
Visions for the future	What things would you like to see change about (this community)? Have the problems for these people gotten better or worse as (the community) has changed? Why do you think this is? Who are the leaders in this community? Who drives change?

Participants were selected to represent stakeholder groups relevant to ongoing stream remediation work in Milwaukee. Five different stakeholder types were identified. Resident stakeholders are people living in close proximity to the remediation site but with no professional interest in the project. Government officials are stakeholders affiliated with government entities with an interest or role in the remediation. Environmental and community NGOs (non-governmental organizations) are stakeholders affiliated with non-profit organizations with social or environmental-oriented missions. Community leaders are stakeholders identified by other participants or self-identified to be an influential and important voice in the community.

To reach a wider set of perspectives on the environment and social justice, we complimented initial purposive sampling with a referral sample. Initial interview contacts were asked to identify others they felt should be included in this study, and who were likely to share an opinion very different from their own. No more than two representatives from any one organization were invited to participate in the interview process to prevent overrepresentation from any one group. Using a combination of initial recruiting efforts and referrals, we reached 35 participants (Table 2.2). The intention of the sample was to

draw across a large range of perceptions rather than to characterize any one stakeholder group completely. Therefore, no respondent was expected to represent a larger social group, but rather was intended to help distribute interviews across professional and personal characteristics likely to influence perceptions.

**Table 2.2.** Sample composition.

<b>Stakeholder Group</b>	<b>Number of Participants</b>
Resident stakeholder	9
Government official	6
Environmental NGO	4
Community NGO	11
Community leader	5

Interview analysis drew on a constructivist grounded theory approach and utilized open coding strategies, comprehensive memos, theme definition, and pile sorting as the primary methods of analysis [45]. Atlas.ti (Atlas.ti Scientific Software Development GmbH, Berlin, Germany) [46] was used to implement open coding strategies to build a list of emergent themes common throughout the interviews. Memos summarized the essence of the participant and their theory of change. From the memos, we identified common themes shared across two or more interview participants [45]. Each author read the memos and assigned the interview to a group based on their interpretation of the explicit and latent definition contained in the interview and summarized in the memo. Researchers then discussed what made groups of interviews similar, which then informed the title or brief description of each pile. To assure the reliability and validity of theme definition, the authors adapted pile sorting methods, attempting to re-sort the interviews into the previously defined thematic categories again and again [45]. Over several iterations of sorting, the definitions of the theme became more refined and the placement of interviews into piles consistent. This process was completed for all three topics of interest before we began to interpret the results [47].

#### **4. Results and Discussion**

This paper aims to highlight connections between environmental justice and sustainability. If urban sustainability efforts seek to successfully embrace the triple bottom line of economic development, environmental protection, and social equity, we need to make strides in closing the gap between effective research and implementation where there is a particular lag in social equity considerations. We posit that stakeholder’s theories of change have three components: (1) perceptions of environmental benefits and burdens, (2) production of social and environmental inequity, and (3) future visions for positive change. These elements help to identify places of unity between sustainability and environmental

justice efforts. Our analysis illustrates how stakeholders establish and enact different theories of change in response to perceived environmental injustice and sustainability challenges in Milwaukee.

#### 4.1. Identified Environmental Benefits and Burdens

Milwaukee stakeholders rarely differentiated between social and environmental factors implicated in the distribution of environmental benefits and burdens, but rather conceived of these as being one and the same. When thinking about injustice, respondents blurred the lines between what is considered “human” and what is considered “natural”. The idea of a human-nature binary is depicted in numerous papers and positioned as problematic for how people understand socio-ecological interactions [3,48–50]. However, our findings suggest that the lived experience of the production of justice and injustice, as reflected by our stakeholders, involves a series of inextricably linked social and environmental factors. Rather than picturing nature as “out there”, and not within the city, our stakeholders implicate both human and natural forces for the uneven distribution of benefits and burdens. What can this entangled web of social and environmental factors help us to understand about the potential for local environmental and social change to impact each other?

To answer this question, we first asked participants to identify environmental benefits and burdens. Environmental benefits, or factors affecting positive interactions and outcomes, included bike paths, maintained parks and natural spaces, access to water recreation opportunities, and environmental education opportunities. Environmental burdens, or factors detracting from the environment, included flooding, poorly maintained natural spaces, crime, unmaintained foreclosed homes, water pollution, physical danger related to stream channelization, and contaminated and unsafe fish for consumption. Looking at these lists, we observed very little delineation between environmental and social factors—evidence that our stakeholders perceive these factors as interacting and influencing each other. Rather than delineating the impact of environmental and social factors, stakeholders emphasized how benefits and burdens are unevenly distributed throughout the city spatially, temporally, sociodemographically, and socioeconomically. These stakeholders viewed environmental burdens as a mediating factor which played a role in allocating benefits and burdens and also influenced the degree to which they impacted community members. For instance, one participant who worked for a community NGO focused on the impact of urban blight. The interviewee (161A) believes that the lack of funding and action for neighborhood improvements has led to a severely blighted neighborhood, subsequently contributing to a despondent and dispirited state of mind. Thus, in the eyes of the interview participant, both social and

environmental factors implicate the end result of a depressed mentality. From this perspective, environmental burdens are mutually constitutive of structural problems within the neighborhood alongside economic and social problems. This reflects a conception of nature which is not asocial [51] but rather conceives of nature as integral to the social fabric.

The list of benefits and burdens generated by stakeholders emphasized everyday sources of injustice over the more acute, high-impact sources typically highlighted in environmental justice literature where low-income minority communities are disproportionately burdened by polluters. The focus on everyday injustices recognizes different environmental burdens impairing a person's ability to carry out tasks necessary to live out a "full life" [52]. For example, a community-based NGO (150A) talked about how lack of access to a grocery store within a low-income minority neighborhood put community residents in a position where they had to spend more resources to meet basic household needs rather than being able to invest time and energy in civic participation. Satisfying more pressing needs that are also more difficult to access by some parts of the community deters the ability of those people to participate in civic processes and engage in local decision-making.

Another spoke of injustices that interfere with the ability of citizens without personal means of transportation to enjoy parts of the city outside of their neighborhood, in particular, natural resources like Lake Michigan.

"Yes. Lack of mobility is a big problem. So it's not likely that a lot of families go out of their particular neighborhood to go to a park or the river or even Lake Michigan. However, Milwaukee has a substantial amount of ball courts and small lots and parks that have gone, I guess with disrepair. So the opportunity is potentially there to invest back in the community, some of these resources. But the families that we talk to, they don't—They rarely ever get down to Lake Michigan. We've talked to families that have kids that are teenagers that have never seen Lake Michigan (that live in) the city of Milwaukee. Yeah, so —do they get to experience a lot of these natural resources? No. But I think that it's other conditions that are keeping them from enjoying the resources." (Community NGO, 157A)

Stakeholder characterization of environmental benefits and burdens demonstrates a shared recognition of everyday injustices in social, environmental, and economic change processes. Stakeholders share the view that these seemingly minor injustices interact in complex ways with local policy interventions. The constant neglect—Whether intentional or unintentional—To mediate these everyday injustices impedes quality of life, the ability for urban citizens to live out their own definitions of a productive and full life, and culminates in larger, more widespread inequalities. The prevalence of everyday injustices as a focus of participants is significant. Throughout the history of the environmental justice movement, the focus has typically been severe and large-scale cases of injustice. This study evidences that citizens do not identify isolated instances of injustice, but rather, they identify continued conditions that create injustice and the influence they have on people's day-to-day lives [43,52–54].

Our respondents' conception of injustice underscores a need to include every day or chronic injustice in both the academic and applied field of environmental justice. Centering everyday injustice within environmental justice claims also highlights the potential for better integration of environmental justice concerns within sustainability initiatives. Sustainability initiatives call for a more holistic view of local economic, social, and environmental conditions [55,56], and interventions associated with this viewpoint may be better able to engage with the inherent unevenness of social and environmental benefits and burdens. For instance, improving transportation and access from lower income communities to become connected to natural spaces, jobs, and healthy grocery stores is a goal in a variety of city-wide sustainability plans [57–59], yet this lack of local access is also considered a form of injustice, as evidenced by participants in our study. Recasting sustainability analysis and planning through the lens of environmental justice provides an opportunity to increase the reach and effectiveness of local interventions.

#### 4.2. Production of Social and Environmental Inequity

When examining our respondents' mental maps for how change occurs over time, we saw evidence for two distinct frameworks for how institutional interventions can shape that change. Participants described change as: (a) following a linear pathway characterized by cause and effect relationships or (b) following a non-linear pathway characterized by complex interactions across multiple systems. These two mental maps are delineated by where stakeholders attribute the primary drivers of inequity. The divergence we observe in terms of how respondents view the social production of inequity has significant implications for how communities pursue procedural justice. Mental models based upon a linear sequence would privilege an incremental or ad hoc approach whereby a specific injustice is identified, a policy or action to address the injustice is developed, and a discrete list of stakeholders implement the necessary policy or action to address the injustice. Over time, a sequence of such responses will cumulatively result in positive social and environmental change, as well as a more equitable landscape. In contrast, a mental model based upon complex interactions focuses on the intricate relationships between multiple institutional stakeholders, whereby interventions elicit a complicated array of interactions and institutional responses. Delineating these two mental maps and identifying which stakeholders are predisposed to each perspective provides important insight into the potential for collective action to address injustice, as well as a lens for closer understanding about why well-intentioned interventions have in the past at times either exacerbated existing problems or simply displaced them to different locations.

In order to better understand which perspectives were associated with which stakeholders, we parse out stakeholders by their mental map of change. Table 2.3 displays which method each stakeholder type used to describe the production of injustice. Overall, the distribution of responses was relatively even between linear and non-linear pathways across stakeholders. However, within stakeholder types, stakeholders from community NGOs favored non-linear pathways while non-institutional community leaders favored linear pathways. While our sample does not allow us to discern whether this variance is indicative of larger differences between groups, their differentiation has important implications for affecting interventions on the urban environment. Future studies might test whether observed differences are related to differences in either (a) depth of interest and knowledge concerning the issue or (b) a general tendency to organize the world into either linear or non-linear systems.

**Table 2.3.** Stakeholder affiliation and their production of injustice pathway.

<b>Affiliation</b>	<b>Linear</b>	<b>Non-Linear</b>	<b>Unidentified</b>
Milwaukee resident	4 (44.4%)	5 (55.5%)	0
Government official	4 (66.6%)	2 (33.3%)	0
Environmental NGO	2 (50%)	1 (25%)	1 (25%)
Community NGO	4 (36.4%)	7 (63.6%)	0
Community leader	4 (80%)	0	1 (20%)
<b>TOTAL</b>	<b>18 (51.4%)</b>	<b>15 (42.9%)</b>	<b>2 (0.06%)</b>

#### 4.2.1. Production as a Linear Pathway

Eighteen participants described the production of injustice as a linear, causal, or sequential process in which one thing follows the next, in a logical order. This pathway is described and presented in a way that mimics an equation, where variables do not necessarily interact together, but rather, one thing is the product of the variables building upon each other. Interview participants responded to questions regarding environmental quality, social vulnerability, and social and environmental change by describing problems of injustice in a way that builds upon itself sequentially. For instance, interview participant 71A, a stakeholder working for an environmental NGO, discussed why waterways unsuitable for fishing, drinking, and swimming is the environmental injustice of concern. The creation and perpetuation of this problem is seen as a result of a series of discrete events. Following this logic, the city's infrastructure is the root cause, beginning with the poor choice of implementing a combined sewer system, followed by failure to properly maintain an antiquated sewer system. The inability to maintain is due de-prioritization of this problem. This is a result of the more pressing problem of household sewage backups. Both time and financial constraints force municipalities to choose which problem to address; in this case, household sewage backups are the priority due to the extreme human health impacts of raw sewage in homes. Thus,

the problem of combined sewer overflows (CSOs) is pushed down on the municipality's to-do list. Still, societal and environmental processes are responsible for the production of injustice, and in this case is perceived to take a linear form. The process, according to 71A, can be ordered as follows: (1) poor infrastructure design, (2) lack of maintenance, (3) funds first allocated toward household sewage backups resulting from antiquated infrastructure, and the next step can be inferred as (4) funds allocated to updating infrastructure to eliminate CSOs. Relieving injustice is a matter of steps to be taken, dependent on available funds.

#### 4.2.2. Production as a Non-Linear Pathway

Fifteen participants described different non-linear interactions that create injustice. These interview participants responded to questions about environmental quality, vulnerable communities, and environmental and social change with statements that indicated that they viewed both environmental and social drivers as interacting in complex and often unpredictable ways to co-produce the problem at hand. For example, interview participant 159A, a community NGO stakeholder, demonstrates this notion:

“It's gotten worse, just because of the lack of opportunities that they have. The lack of opportunities mixed, you know, if the person has a tough time finding a job and their house floods then they're kind of SOL (shit out of luck). They have two really large issues they need to tackle. And so one sort of scratches the other's back, in a sense.”

In the case of this participant, the production of injustice involves complex interactions between environmental hazards (flooding) and opportunity (jobs) which spin off negative externalities that disproportionately impact marginalized groups. At an earlier point in the interview, the respondent also implicates a lack of reliable transportation and spatial mismatch between jobs and housing [60,61] as other spatially mediated drivers of inequality. Flooding, job access, and disinvestment are the root causes and main drivers of uneven access to resources and situating marginalized populations in marginalized areas. The interactions of socio-environmental processes entered into a negative feedback loop, making the situation perpetually worse and nearly impossible to recover without major intervention.

In constructing the notion of injustice as a complex system, injustice is produced by complicated interactions between socio-environmental factors [43,48]. Participants clearly identified what they viewed as root causes and main drivers of injustice. In addition, describing the production of injustice as a complex system characterized by feedback loops underscores the importance of observing the circumstances under which positive or negative feedback is being generated so this information can be accounted for in the future. The concept of feedback loops encapsulates processes in cyclical patterns in

which a variety of factors interact and influence the state of a particular system. Feedback loops help to illustrate that dynamic, linked variables constitute and can change a system [62].

In parsing out these two distinct mental models, it is natural to not only want to compare them to each other but also to judge their efficacy in understanding, predicting, and affecting change. Our primary goal, however, is not to characterize one model as being stronger or more efficacious when compared to the other, but rather to understand the application of the models to change making processes, as well as the potential implications for what happens when stakeholders with differing mental models collaborate to address a common problem. Engaging with this question can help us to unify understanding and produce a more holistic or systems thinking approach to understanding the forces at play in urban socioecological systems [63]. This can highlight interventions or solutions that address the root causes and main drivers of a problem rather than symptoms of larger forces [56].

### 4.3. Achieving Positive Change

Our analysis revealed organizations and agents that interviewees identified as able to make change toward environmental justice in Milwaukee. In discussing everyday environmental injustices, each participant’s response reflected one dominant perspective. In sum, we identified six perspectives on how to enact change to redress past environmental injustice as a part of efforts toward greater environmental sustainability. The visions to achieve positive change are: (1) government initiatives, (2) grassroots and NGOs, (3) community empowerment, (4) education, (5) personal action and outreach, and (6) economic development. Top-down government decision-making and grassroots organizations and NGOs were most prevalent whereas environmental education, personal action, economic development and market-based solutions were mentioned less frequently (Table 2.4). Each of the six visions are explained below.

**Table 2.4.** Stakeholder affiliation and their vision for positive change.

Vision for Positive Change	Stakeholder Group					TOTAL
	Milwaukee Resident	Government Official	Environmental NGO	Community NGO	Community Leader	
Government initiatives	2	2	0	4	3	11
Grassroots & NGOs	1	1	2	2	1	7
Community empowerment	1	1	1	3	0	6
Education	3	0	0	2	0	5
Personal action & outreach	0	1	1	0	0	2
Economic development	0	1	0	0	1	2
Unidentifiable	2	0	0	0	0	2
<b>TOTAL</b>	<b>9</b>	<b>6</b>	<b>4</b>	<b>11</b>	<b>5</b>	<b>35</b>

#### 4.3.1. Government Initiatives

Eleven participants identified top-down government policies (from the city council-level or larger) as the most effective way to address everyday environmental injustices. For these participants, government



buy-in was an essential element of improving environmental conditions in the city overall but particularly in low-income neighborhoods. For example, one interviewee discussed park funding to illustrate the importance of sustained government funding and leadership.

“I think the parks system has always been an extremely valuable commodity for those folks that don’t have material wealth in a state or a park-like atmosphere that are privately owned. So that means the vast majority of the population needs a well-run park system in order to have a place to go with their free time. And the ability to enjoy nature, have a picnic, relax, all of the things that maybe we have come to take for granted. We dare not do that because if these parks deteriorate then the masses won’t have a place to go.” (Milwaukee Resident, 163A)

#### 4.3.2. Grassroots and NGOs

Seven participants identified non-governmental and other grassroots organizations as responsible for making change, particularly changes related to park maintenance and management. These respondents expressed greatest trust in NGOs to steward the public interest through political and financial fluctuations. For these respondents, groups with large volunteer bases were best positioned to advocate for and oversee meaningful changes in lower-income minority neighborhoods and to ensure upkeep for parks and natural spaces in the city.

#### 4.3.3. Community Empowerment

Six participants expressed visions for change grounded in different forms of community empowerment. In their interviews, they focused on creating more inclusive form of public participation and working closely with low-income and minority populations to enhance procedural forms of environmental justice. Participant 69A describes the importance of focusing on process in order to deliver outcomes that enhance both environmental justice and sustainability:

“Instead of building bigger and bigger and bigger and more and more and more, I think we need to scale back and realize that we are more rich when we have stronger community ties and stronger neighborhood ties and have a clean environment. Without that, we’re gonna be really unhealthy, and we’re gonna end up spending more and more money on things that we don’t need to.” (Government official, 69A)

#### 4.3.4. Education

Five interviewees discussed environmental education and outreach as the most important way to inspire change perceived a need to provide new and “correct” information to people who, in their view, experienced environmental injustices as a result of larger, societally-driven environmental problems. In particular, they preferred interventions that provided resources to help Milwaukee’s youth learn about, connect to, and care for Milwaukee’s natural resources. In this view, a focus on youth is an opportunity to create a culture of urban environmental stewardship and civic engagement to respond to historically embedded patterns of environmental injustice and as-yet unanticipated challenges facing the environmental and economic future of the city.

#### 4.3.5. Personal Action and Outreach

Two participants expressed a vision for positive change grounded in personal responsibility and action. This view emphasized the need for people to personally seek the “correct” information in order to change their habits, attitudes, and behaviors. The emphasis on personal change demonstrates the notion that people need to take the initiative in making the change they wish to see. This view assigned the individual with responsibility for seeking information, knowledge, and resources necessary to make pro-environmental changes. Though it was infrequently the dominant mechanism for achieving change, it was a common secondary vision for change in other interviews.

#### 4.3.6. Economic Development

Two participants articulated visions for positive change rooted in economic development and other market-based processes. Their statements reflect the view that market-based environmental solutions help create incentives to invest in disadvantaged areas of the city.

#### 4.4. Synthesis

Whereas participants expressed a relatively unified view of environmental injustice as an everyday experience (Section 4.1) and could be divided into two relatively even and mutually exclusive groups with respect to their views on how injustices are produced (Section 4.2), their visions for how to make change in support of environmental justice were more diverse. The diversity of responses highlights differences in the scale at which people envision change occurring.

Parsing out the different visions for positive change is critical to identifying where visions might conflict and what kinds of consequences these changes may create. For example, government interventions can be effective, but park maintenance and other noncritical services are frequently cut from city governance. Increasingly neoliberal policies and roll-back of government programs have led to the defunding of many public agencies, leaving private sector and non-profits to fill in those gaps [64–66]. Therefore, facilitating environmental justice and sustainability programs across a city may require environmental and community groups to supplement the duties of political leaders and policy enforcement which are being rapidly defunded in Milwaukee, WI, USA.

Similarly, relegating responsibility for positive change to either future generations (environmental education) or individuals (behavior change) ignores greater structural and larger-scale processes that need to be addressed in order to make substantial change, particularly related to equity in sustainability [67–69]. While relatively easy and cheap to implement, youth programs like those of Milwaukee’s Urban Ecology Center [70] may have a much larger impact over the access to education, environmental safety, and the environmental quality of Milwaukee’s natural areas when combined with procedural changes that engage youth (and the community overall) in the process of setting environmental clean-up priorities [71–74].

We observe that differences in pathways toward environmental justice do not follow stakeholder identities (Table 4). This observation is worthy of additional investigation, especially given the frequency with which stakeholder groups are used to frame research and policy analysis. As a result of our work, we hypothesize that cities (like Milwaukee, WI, USA) where theory of change sorts independently from stakeholder identity, will have greater capacity to develop and implement interventions that integrate concern for environmental justice and sustainability. This capacity comes through the ability to leverage interventions at multiple scales in order to address the full complexity of the system.

The focus on affecting change at any one level in isolation may overlook inequity at other levels. The need for interventions in inequity across many levels was recognized by interviewees. For example, the following quote illustrates why it might be problematic to concentrate on environmental justice for the city without also examining neighborhoods.

“Even in quality of life and green space, as areas get built up and gentrification might set in and people get priced out of their homes and their living spaces and they, again, don’t get to live in this area that maybe has a lot more beautiful green spaces. So it’s these outside forces that are maybe creating some great change for the environment, but then those folks don’t get to enjoy it.” (Community NGO, 150A)

This statement highlights concerns that city-level action in isolation may result in the perpetuation of inequitable actions and outcomes. This is illuminated in much of the literature discussing the use of sustainability policies to enable the re-appropriation of nature, and subsequently the displacement of marginalized groups who would perhaps benefit most from environmental improvements [75].

Another key finding is the clear divergence in how to best initiate positive change between those who hold linear versus non-linear views of environmental injustice production (Table 2.5). Differences in visions for positive change between those with linear versus non-linear views suggest that the respondents’ theory of change shapes how they perceive opportunities to relate justice to environmental and economic elements of sustainability. Participants identified as having a linear method of constructing the production of injustice overwhelmingly favored top-down government decisions as the best agent of change with a few choosing economic development/market-based solutions and grassroots organizations and NGOs. Contrary to linear thinkers, those identified as using a non-linear pathway of injustice tended to favor bottom-up agents of change including education and outreach, community empowerment, and grassroots organizations and NGOs.

**Table 2.5.** Linear and non-linear thinkers and their visions for positive change.

Vision for Positive Change	Mental Model		
	Linear	Non-Linear	Unidentifiable
Government initiatives	10	1	0
Grassroots & NGOs	2	4	1
Community empowerment	1	4	1
Education	0	5	0
Personal action and outreach	1	1	0
Economic development	2	0	0
Unidentifiable	2	0	0

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TOTAL	18	15	2
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While different stakeholder types do not show distinct separation between linear and non-linear thinking (Table 2.4), linear and non-linear thinkers demonstrate a very clear bifurcation in the different approaches or agents responsible for making change (Table 2.5). This shows that stakeholder groups are diverse in both their thinking and favored agents of change. When thinking of sustainability and environmental justice as complex problems, it is beneficial to have a variety of methods working toward improvements, potentially bringing a more holistic and dynamic approach. In knowing that stakeholders are thinking at different scales and with different visions for change shows the potential to bring equal weight to the three core tenants of sustainability when working toward common goals. These findings illustrate the potential for efforts to be made across stakeholders, with diverse methods and different ways of thinking. However, success depends on whether or not these efforts are made in parallel or in tandem; opening the door for future research on how these visions and ways of thinking interact.

**5. Conclusions**

Uncovering differences and similarities in stakeholder theories of change can begin to bridge the gap between environmental justice activism and sustainability initiatives that are concurrent but not yet cohesive. In many instances, what one person considers ethical and sustainable might be considered highly unjust and unsustainable to another [35], leading to disagreement and conflict over priorities and actions. Theories of change help to understand what priorities are upheld and what people believe should be sustained [76]—environment, society, or economy—in which social equity typically falls last [20,27,77,78]. Rather than pitting one against another [23] or leaving different ethical standpoints at odds [35,36], theories of change reveal the intricacies behind the actions and priorities of activists, policy makers, residents, and NGOs alike. With the goal of creating more just and sustainable cities, it is necessary to enact multilevel and dynamic interventions that recognize a constant moving baseline [29]. This study shows that interventions across scales and stakeholders exist but may be working in parallel rather than in tandem. Bringing cohesion and mutual understanding between stakeholder priorities and acknowledging the potential for complex interactions across scales for governance can help to mitigate the potential for development conflicts that pit social equity against environmental and economic benefits.

**Acknowledgments:** We gratefully acknowledge funding from Illinois-Indiana Sea Grant, grant no. NA14OAR4170095 “Mapping Social Vulnerability in EPA-designated Areas of Concern” and the University of Illinois Urbana-Champaign Graduate College Focal Point Initiative “Urban Environmental Equity”. The opinions and findings presented here are those of the authors alone. The authors would also like to gratefully thank Elizabeth Breyer, El

Lower, and numerous graduate and undergraduate researchers for their contribution to this work through the Urban Environmental Equity project.

**Author Contributions:** Kaitlyn Hornik is the main author of this paper. She developed the original manuscript and conducted data analysis. Bethany Cutts and Andrew Greenlee are the principal investigators who helped form the focus of this paper, guide appropriate methodology, and contributed writing and refining in the final stages of this paper.

**Conflicts of Interest:** The authors declare no conflict of interest.

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## CHAPTER 3

### “Why are we at 74<sup>th</sup> and Capitol and we have two white guys in the room?” and Other Challenges in Community-Based Participatory Research

#### **Abstract**

Environmental improvement projects inherently impact the surrounding communities, particularly in urban areas. While many regulations and funding restrictions require these projects to remain motivated solely by federal environmental standards or specific standards defined by funding sources, there may be room to incorporate social equity concerns into those actions. Rather than limiting the priorities and leaving the impacts to pan out in a way that may or may not improve social equity, perhaps adjustments can be made within the project’s scope to deliberately incorporate community needs, leading to more holistic and sustainable outcomes. We implemented community-based participatory research methods in Milwaukee, Wisconsin to evaluate the social impacts of a strictly environmentally-oriented waterway remediation project to bridge this with justice and sustainability considerations. We conducted a series of interviews, compiled an informational community-based documentary, and held reflective group interviews. Our results strayed from expectations and conversations of urban equity tended toward the undercutting issues of racial disparities in Milwaukee and the United States today. These results and the research process brought about a series of internal challenges, opportunities, and ethical dilemmas. Both the results and the research process have much to offer for informing future steps in urban environmental equity research. Conducting research in a constantly changing social context requires awareness of our own predispositions and sensitivity to impacts research may have for agencies or communities involved.

#### **Introduction**

Community-based participatory research (CBPR) methods have increasingly become a popular method in the field of environmental justice as a way to better understand the ways minority communities are disproportionately burdened by environmental degradation (Minkler, et al., 2008; Shepard, Northridge, Prakash, & Stover, 2002; Tajik & Minkler, 2006). CPBR aims to include the community in the research process and valorize their knowledge while simultaneously educating, empowering, and destabilizing traditional power imbalances (Alkon, 2011; Chavez et al., 2004; Wallerstein & Duran, 2006). CPBR

methods also aim to improve procedural injustices faced by many low income minority communities by emphasizing co-learning processes (as opposed to top-down, expert driven processes) and bringing equity to the decision-making process (Alkon, 2011; Balazs & Morello-Frosch, 2013; Cacari-Stone, et al., 2014; Minkler et al., 2008). The core principles of CBPR align and strengthen many of the goals of environmental justice movement; there is emphasis on improving community capacity, empowerment, and trust with agencies and research institutions (Shepard et al., 2002; Wallerstein & Duran, 2006).

While environmental justice is a growing movement and research agenda, sustainability is a widely accepted initiative. The concept of “just sustainability” (Agyeman, 2005; Agyeman, et al., 2002; Agyeman & Evans, 2003; Agyeman, 2013) aims to move to a more holistic version of sustainability and elevate social equity concerns among environmental and economic priorities. CBPR offers a framework to understand the impacts of localized challenges from community member’s point of view and gain an understanding that cannot come from quantitative data sources or outsiders to the community (Cumming & Norwood, 2012; Evans & Foster, 2009). Many sustainable development projects are implemented with economic or environmental priorities upheld with the assumption that social improvements are an inherent result (Checker, 2011; Gunder, 2006; Nijaki, 2015; Opp & Saunders, 2013). CBPR offers the opportunity to get to know community needs and impacts from the ground, up and can be instrumental in ensuring well-intentioned improvement projects stand to benefit the surrounding community as well. The idea of “healthy human habitats” is central to just sustainability, allowing greater consideration for how social disparities can be remedied through the creation and management of the built environment (Agyeman, 2008; Warner, 2002). Both the results and the process of CBPR stand to benefit the community; the process itself is empowering and brings equity to decision-making while the results bring a robust set of information to be used in policy and decision-making processes at various scales (Shepard et al., 2002; Tajik & Minkler, 2006).

The effectiveness of traditional participation practices, predominantly in the form of public meetings and comment periods is debated. Despite the well-meaning legal requirement for public participation in planning processes created in the 1960’s, it has been found that these required practices do not necessarily constitute meaningful participation (Chaskin, et al., 2012). Previous work has found that traditional community engagement methods exclude marginalized groups from the providing input (Gibson-Wood & Wakefield, 2013). Some barriers to participation for marginalized populations include scheduling to only accommodate people with 9-5 jobs, communication barriers including vocabulary and

language, and aversion to the public speaking atmosphere (Abelson et al., 2003; Chaskin et al., 2012; Innes & Booher, 2004). As it stands now, traditional participation processes exclude, whether intentional or a result of relic methods, the very groups their projects may impact most. When considering ethics of these standard procedures, excluding groups from participation further exacerbate environmental and social injustices. Without their input, experiences, and perspectives on the issue at hand, the solution is likely to disproportionately benefit some groups over others.

As a result of the relative ineffectiveness of these practices, CBPR methods have recently emerged as an effective tool for developing inclusive and accessible public participation (Evans & Foster, 2009). Different variations of community inclusion and empowerment have emerged under the umbrella of CBPR. The Community Voice Method (CVM) developed by Cumming & Norwood (2012), is focused on creating an inclusive and community-focused form of public participation to improve the planning process. This method is based around building a documentary from the residents' perspective that addresses debated topics within a particular community with a focus on reflexivity and iteration between the researchers and community. Creating a video guided by CBPR core values has great potential to disseminate information while also directly engaging community members, strengthening relationships, and empowering individuals in groups (Chavez et al., 2004; Cumming & Norwood, 2012). Creating a video composed of familiar faces brings credibility to the information presented, allows people to have their voice heard, and can help to enlighten other community members to alternative perspectives and opinions (Chavez et al., 2004; Cumming & Norwood, 2012). Through the implementation of the CVM in a rural community in North Carolina, Cumming and Norwood (2012) found that the CVM improved the participatory process in three ways; 1) by providing people with accessible and trustworthy information on relevant community issues, 2) by helping to establish an inclusive and productive public dialog, and 3) bolstering stakeholder capacity to address imminent future contentions. Though the intention of the CVM and other CBPR methods are to make participation more accessible, appealing, and equitable, CBPR is laden with challenges. This paper aims to discuss the challenges and hurdles involved in CBPR projects, drawing from challenges encountered while implementing a modified version of the CVM in Milwaukee, Wisconsin. Minority recruitment, structural and institutional racism, ethical dilemmas in the research process, and a mismatch between sustainability and environmental justice initiatives have slowed the research process, but have ignited productive and important discussions among researchers, agency representatives, and community members.

**Minority recruitment** is a known challenge to all public participation and community engagement processes (Alvarez, et al., 2006; Buchecker, et al., 2003; Minkler, 2004), but highly sought after in environmental justice activism and scholarship and sustainable development initiatives. Language barriers, inaccessible times and locations, and aversion to public speaking do not necessarily get to a deeper understanding of why minorities do not engage with research and participation opportunities in their local communities. Perhaps to understand this mismatch between minority communities and civic engagement, we need to step back and look at the very way we define what constitutes an environmentalism and nature. African American communities and government agencies or research institutions operating under a white, Euro-American definition of environmentalism are not always compatible (Alkon, 2008; Buijs et al., 2012; Gobster, 2001; Whittaker, et al., 2005). Social constructions of what constitutes nature help to understand how definitions of environmentalism conflict with one another, and prohibit inclusion from all facets of the community. The white, Euro-American construction of nature places an emphasis and valorizes the idea of pristine wilderness that is “out there” and not within the spaces where daily life occurs (Cronon, 2016). This human-nature binary can become problematic when it comes to defining where nature is and is not (Cronon, 2016; Millington, 2013; Swyngedouw, 1996). Many sustainability-focused projects are implemented by agencies and groups typically dominated by this idea that true nature is only where people are not. Alternatively, an environmental justice construction of nature emphasizes it as a space where we “live, work, and play,” allowing to see patterns of disparity in these spaces (Alkon, 2008; Brulle & Pellow, 2006; Golden, et al., 2016; Seymour, 2012; Whitehead, 2009). Alkon (2008) posits, “by defining the environment as the places where low-income people and people of color are rather than where they are not, ecological issues are clearly connected to issues of inequality” (p. 272). These fundamental differences in constructions lead to a mismatch in efforts between sustainability and environmental justice movements - particularly when most initiatives are driven by a sustainability mindset.

**Structural and institutional racism** is evident in many cases today, yet there is seldom connection between these forms of racism and environmental justice (Park, 2004). Institutional and structural racism are forms of discrimination that are built into society’s policies and practices that disadvantage or exclude racial and ethnic minorities (García & Sharif, 2015; Norgaard, et al., 2011; Jones, 2000; Ross & Leigh, 2000). Bringing CBPR methods to sustainability and environmental justice initiatives offers an opportunity to unearth instances of structural and institutional racism and readily address the issues to uplift minority communities. Urban revitalization and sustainable development projects are inextricably linked with

issues of racial disparity, and leaving race out of the conversation inevitably perpetuates these patterns (Ross & Leigh, 2000). Ross & Leigh (2000) state that race is the most important framing of development problems but is most often the last consideration in planning processes and simply giving the opportunity for minorities to participate is not going to effectively eradicate these forms of racism. Racism must be explicitly addressed and deliberate efforts must be made to mitigate racial disparities. Government agencies and many research institutions do not explicitly address racism due to the requirement to remain apolitical and operate under a strict set of scientific standards (Holifield, 2004). A previous study found that EPA representatives adamantly stated that their decisions about remediation locations and solutions are grounded in science and were never based upon racial or economic standing, allowing them to remain impartial and not give preferential treatment to certain types of communities (Holifield, 2004). Despite efforts to remain apolitical, government agency and university research inevitably spans racial and economic lines. Disregard to explicitly include these factors in development projects inherently perpetuates and enables the current systemic inequities (Byrne & Wolch, 2009; Ross & Leigh, 2000). To be clear, we are not suggesting that agencies and universities are racist and ill-intentioned, it is meant to highlight the regulatory red tape prohibiting the most just and equitable actions. CBPR projects can illuminate instances of marginalization and allow agencies and researchers to work within their scope but still leverage community needs to the best of their abilities. Since government and policymaking do not move in leaps and bounds, small efforts to redress inequality can help to bring justice to the system and result in more holistically sustainable outcomes.

**Research ethics** pose yet another set of challenges to CBPR. Researchers must negotiate a delicate balance between the community, their role as researchers, and involvement with government agencies and funding sources. Banks (2013) suggests the idea of “everyday ethics” in CBPR to bring emphasis to inherent responsibilities associated with forming these particular relationships. We must acknowledge our own positionalities and power dynamics that are created between community, researchers, and agencies. While CBPR approaches are important for knowledge mobilization and co-learning, it may also be seen as an opportunity for cooption by agencies and research institutions to their advantage (Banks et al., 2013). Researchers can be caught between a rock and a hard place when making decisions about different courses of action that will likely have negative results. Researchers are positioned as an “embedded participant” that must act with ethical sensitivity and responsibility that comes with forming relationships through research (Banks et al., 2013). Researchers can be caught between many roles (facilitator, researcher, peer, or video technician) that set out to accommodate a variety of interests

(community, NGOs, funders, or government agency), leading them to be caught in complex ethical dilemmas with solutions that may not be satisfactory to all parties (London et al., *in press*; Mistry, et al., 2015).

**Environmental justice and sustainability** initiatives can be strengthened by integrating CBPR methods into the research and planning phases and have great potential to complement and perhaps unite these two movements. Yet researchers have much to learn from the challenges that arise throughout the process of conducting this kind of scholarship. It is important to reflect upon these challenges so as to raise awareness and move the field of CBPR research forward in an ethical and productive manner. The following paper aims to highlight and discuss ethical dilemmas and challenges encountered in CBPR and suggest next steps for the Urban Environmental Equity project.

### **Methods, Research Timeline, & Study Site**

The methods used were designed and inspired by the Community Voice Method (CVM) (Cummings & Norwood, 2013). It has previously been implemented in rural settings as a precursor to projects that stand to significantly alter the community form and function. While the intention of the CVM is to hear from all members of the community and base future development decisions on the documentaries, we altered the method to bridge the experiences of the community members with the solely environmentally driven remediation project. This project took place in the Lincoln Park community of Milwaukee, Wisconsin; a predominantly low-income African American neighborhood bordering the remediation site. Initial interviews were conducted from February 2014 to February 2015 and accounted for 35 participants living and/or working in Milwaukee. Semi-structured interviews were video and audio recorded to later be compiled into an informative documentary intended to be a long-standing resource for leaders and decision makers in the city. Table 2.2 displays the interview sample composition. Interviews (see table 2.1) were later transcribed and coded using Atlas.ti (Friese, 2011) to identify main themes throughout the interviews. As a result of coding, the documentary was constructed using Adobe Premiere (Adobe Premiere Pro CC, 2016) and was comprised of three parts beginning with overarching issues and information in Milwaukee, narrowing down to engagement with urban nature, and finally pinpointing the Lincoln Park remediation project. Table 3.1 shows the documentary topics and questions posed during the group interviews. Appendix A provides private links for viewing parts I-III of the documentary (these are not yet publicly available).

The first iteration of the documentary was intended to be reflected upon and critiqued in focus group settings. Focus groups were advertised to previous participants as well as the broader community. All previous participants were notified directly via email directly and Twitter and listserv groups were used to gain new participants. An additional web crawl was done to contact groups directly to help spread the word to their constituents. Sessions were organized at libraries throughout the city and at different times of day to accommodate scheduling and transportation constraints. Recruitment was relatively unsuccessful and as a result, focus groups turned into three sessions of two-person interviews and one phone interview (for a total of 7 participants). Participants were able to watch the videos, reflect, engage in a dialogue responding the questions posed, and share their general thoughts on the content and process.

**Table 3.1.** Documentary organization and discussion questions.

Documentary segment	Questions
Part I: Milwaukee Overview	<ul style="list-style-type: none"> <li>● What does change mean for the people living here?</li> <li>● Where do you think new development intervenes upon Milwaukee’s greatest challenges and legacies?</li> <li>● What changes would you like to see?</li> </ul>
Part II: Community Perspectives on Milwaukee’s Urban Nature	<ul style="list-style-type: none"> <li>● What are some barriers to the equal use and enjoyment of urban nature?</li> <li>● How do you envision positive, equitable change being made in Milwaukee’s urban nature?</li> <li>● How do we begin to negotiate such differences on the path toward making positive change?</li> </ul>
Part III: What is known about the Lincoln Park Contamination and Cleanup?	<ul style="list-style-type: none"> <li>● Can you think of ways the remediation has benefitted the community?</li> <li>● What might be some unintended consequences of the remediation?</li> <li>● How do community perspectives get included in projects like Lincoln Park and what could we do to build on these efforts in the future?</li> </ul>

The seven group interview participants represented a relatively narrow portion of the Milwaukee community. These participants were older, white residents of Milwaukee living nearby the remediation or with a professional stake in the remediation project. Group interview participants almost unanimously suggested that the documentary would be more credible if young minority voices from the Lincoln Park neighborhood were included. Based on this feedback and lack of diversity in group interview participants, the research team decided it was necessary to hire a Milwaukee-based interview specialist to extend the project’s reach and incorporate input from Lincoln Park residents directly. A research specialist based in Milwaukee would likely have improved our success recruiting directly from the community rather than

attempting to recruit from Champaign-Urbana, Illinois. However, the research process was paused after the police shooting of Syville Smith and subsequent Milwaukee riots in August of 2016. Below is a synopsis of this event from two news sources.

*At 3.30 p.m. [August 13, 2016], Milwaukee police stopped a car with two young black men, who, the officers later said, appeared to be suspicious. Twenty seconds into the traffic stop, one of the young men, Sylville Smith, was shot in the chest and arms. The police said that he ran, had a gun in his hand and pointed that gun at the policemen. He died immediately. The other man was arrested. Smith is one of the 600 Americans killed by the police so far this year. Last year, 990 people were shot dead by the police. – (Prashad, 2016)*

*The shooting triggered unrest in the city's north side Saturday night as protesters torched businesses and threw rocks at officers. Four officers were injured and 17 people were arrested, Mayor Tom Barrett said. – (Grinberg & Patterson, 2016)*

As a result of these events, the research was placed on hold. As researchers, it is our responsibility to continue the research with care and sensitivity toward the Milwaukee community. We took this time to reflect upon our roles as researchers and rethink the research approach with respect to the shooting, protests, and trauma the community experienced. While this research was unable to be completed and released publicly in a way that is consistent with CVM philosophy and within the intended timeline, there was much to be learned throughout this process, illustrated below.

## **Results & Discussion**

The following paper aims to illuminate challenges and opportunities in the CBPR process by reflecting on our own positionalities and power dynamics that likely played a role in the research results, analysis, and current status. The following section uses key quotes and moments in the research process to demonstrate the tensions we experienced, the lessons learned, and next steps determined. Since this research is not complete, I discuss the opportunities and barriers each situation presented, followed by recommendations for next steps for the Urban Environmental Equity Project. I begin with a vignette illustrating the experiences in recruiting a diverse sample of participants (Section 3.1) followed a second vignette illustrating the ethical balance between communities, researchers, and agencies (Section 3.2).

### **3.1.1: Diversity in participant recruitment – conflicting accounts of community engagement efforts**



One of the biggest challenges for community-based research and participation discussed in the literature and also proved true in this study is getting low-income minority groups to the table (Alvarez et al., 2006; Buchecker et al., 2003; Minkler, 2004). How can we spark interest from these groups and encourage them to give their perspectives on an issue of concern? With regards to environmental justice and sustainability work, social equity is an integral part, but finding equal inclusion is often most difficult when the work is intended to benefit the very communities we are not hearing from. When conducting the group interview portion of this research project, participants were united in saying that we needed to have more Lincoln Park community members (predominantly lower income African Americans) in the documentary. Yet all participants agreed that is also the hardest group to reach and engage. In addition, when presenting this research at a professional conference, feedback was consistently suggested to reach out and interview more people directly from the Lincoln Park community. During discussions, we heard conflicting experiences with community engagement. People who did not live in the Lincoln Park community stated that efforts were made to recruit participants from that particular area while someone living directly in the community and actively sought opportunities to participate, stated otherwise. The following quote represents the general consensus from people who have a professional or personal stake in the Lincoln Park remediation but are not direct members of the community:

*R1: Well it's the big mystery. I mean why are we at 74th and Capitol [located in a predominantly low-income African American neighborhood] and we have two white guys in the room? I don't know. And the same happened with the Lincoln Park project. It's in a racially diverse area but it was a lot of white representation, a lot of upriver representation, and how do you get people involved who think you're not going to do anything with them? I don't know. I wish I knew.*

*R2: That's always the toughest part is to get people involved.*

This sentiment was shared by six out of seven group interview participants giving feedback on the documentary. They felt the documentary was great, but wanted to hear *from* the Lincoln Park community rather than *about* the community. Despite efforts to incentivize and advertise specifically to low-income minority groups particularly in Lincoln Park and to host meetings in convenient locations, group interview participants were overwhelmingly older white people. However, one interview participant was a resident of the Lincoln Park community and stated that they actively sought out opportunities to participate and get involved in the remediation project, but were unsuccessful. The following quote illustrates their frustration.

R3: *So but—Okay. So here's the thing. Someone was doing something wrong. And I say that because rivers are my job. Like, this is my life, what you're asking me about. It's, like, how do you get people to use these urban spaces? How do I develop and implement programming that meet all these different objectives? Like, this is, literally, what I do. It's my passion. I have a master's degree in doing this. Like, and I happen to live two blocks away from your project area.*

KH: *Yeah, that is perfect.*

R3: *But I never have seen anything. The only reason I know about any of this is because I proactively looked for it.*

This quote is quite contrary to discussions had with government agency and non-profit representatives where they shared information about the efforts made to engage residents of Lincoln Park, but remained unsuccessful at finding willing participants. This is not intended to blame agencies for insufficient community engagement efforts, but rather to illuminate some factors that may have played a contributing role both in recruiting for this research project and agency efforts to engage the Lincoln Park community. This also highlights the potential mismatch between efforts extended and the perceptions and expectations from the community.

### **3.1.2: Maslow's hierarchy vs environmental deprivation theory - barriers to minority recruitment**

Another common topic of conversation during the reflective interviews was the discussion of Maslow's hierarchy of needs (Maslow, 1943). Each discussion at some point was guided in the direction of minority engagement in environmental activities. People repeatedly (directly or indirectly) referenced the hierarchy of needs as the reason why environmental issues were not a priority. The common sentiment was that the Lincoln Park community as a whole has more pressing needs such as finding a job, having a steady income, reliable transportation, and caring for their families as things that come before environmental activities, which is considered a luxury according to Maslow. However, there is a contrary theory -- the environmental deprivation theory (Tremblay & Dunlap, 1978) -- that also may help to provide an alternative explanation for the disinterest in the Lincoln Park remediation that does not privilege the construction of nature as a luxury. This theory posits that environmental concern is directly related to the level of pollution exposure a community experiences -- the more acutely polluted, the more concerned. Perhaps this idea also holds true for the Lincoln Park community. The remediation site borders the east side of the neighborhood and geographically serves as a barrier between Lincoln Park and Glendale, a predominantly affluent, white neighborhood. Upon observation and many statements from interviewees, Lincoln Park residents do not directly interact with the waterways and it does not

appear to be a large priority in their lives. Perhaps the pollution issues in the river were not apparent or directly affecting their lives, therefore leading to little concern and engagement with the remediation. Understanding the potential underlying reason for minority disinterest can help to form more effective engagement strategies.

When asked if there were any unintended consequences of the remediation project – focus group participants did not have any reason to believe anything negative stemmed from the project. Feedback was overwhelmingly positive on this question – however one person mentioned that they have observed more trash in the area perhaps due to increased usage of the space. Once again, remembering the makeup of our group interview participants, this does not come as a surprise. It is great to see that there are no negative consequences for the Lincoln Park community, but it seems as though there are no visible, direct benefits/improvements to the quality of life in that community either. The reduction of contaminants and improvement of the river habitat certainly has benefits, but perhaps those aren't the most visible to the Lincoln Park community, just as the pollution remediation was not visible or a major concern for that community either.

This remediation has drastically improved the river and water quality and is one of the most successful Great Lakes Area of Concern remediation projects. While the environmental impacts of this project have been overwhelmingly positive, perhaps they have broader impacts than what the immediate community needs. This conflict between the greater environmental good, funding capabilities, and the community needs are apparent. How can we engage the community in larger scale or “greater good” projects despite the lack of immediate, visible benefits for a community with different needs?

### **3.1.3: Conducting outreach and research as an outsider**

Another contributing factor to this research falling short on diversity recruitment may have to do with being an outsider not only to Milwaukee, but especially to the Lincoln Park neighborhood. Both geographically and socially, the people conducting this research are outsiders to the community. The Urban Environmental Equity project is located in Champaign-Urbana and not deeply immersed or a known presence in Lincoln Park. In addition, the research team was predominantly white women of presumably higher economic and education status than Lincoln Park residents. While the goals of community-based participatory research are to break down these power dynamics, there are still

lingering assumptions and barriers to overcome. These areas of conflict – race, economic status, education, location, community immersion, and time constraints – are all likely contributing factors to low minority participation. Time constraints, in particular, are challenging in this type of research. In a non-lab setting, you cannot control the current events, politics, etc that may interfere and slow down the research. Researchers are typically operating on specific time frames; typically 2-6 year periods for Master’s and PhD students. If a community-based study cannot be completed within this time frame, does that mean it’s over (London, et al., *in press*)? This perhaps perpetuates many of the power dynamics and weariness of community members to get involved and invest their time in the project. The Urban Environmental Equity project does not wish to perpetuate this issue and is continuing the project past my graduation date to carry out the obligations to the community and to ethically complete this research in line with CVM and CBPR principles.

### **3.2.1: Community perceptions conflicting with agency intention**

The following section illustrates the ethical dilemmas this research project is dealing with throughout the research process. The initial interviews led to a rich body of information about people’s perceptions of environmental improvements and led to many conversations about the deeper, undercutting issues such as racial segregation and economic disparities in Milwaukee. The quote below was made by a community leader living nearby the river. It was included in the documentary and was expected to spark discussion and debate.

R4: *They had cleaned the Milwaukee river, that is, say, in parts. Parts that do not, give the opportunity for the black community to oh, say, enjoy. There is a part of the enjoyment they cut out.*

R4: *Why are certain portions of the Milwaukee River allowed to be dysfunctional when others are made to be economically sound for the area that it runs through?*

Upon preliminary review by agency partners, this statement sparked a great deal of conversation and concern that it implies that these agencies are racist and deliberately not restoring the river in African American communities. Though it is not a formal data source, the quote below is a personal communication from an agency representative regarding the inclusion of to this quote above.

*I’m still concerned about this racism bit (end of the video). The speculation that racism drives the decisions on where to remediate is controversial (and incorrect). The improvements they’re referring to are in a public park that’s widely used by all races. And the “dirty” river section that the interviewee is referring to was in fact cleaned up - under a different authority that didn’t do shoreline restoration. Legacy Act can do shoreline restoration, but only if*

*performed in conjunction with remediation. It would have been illegal for it to restore the section that the interviewee is describing. None of this context is provided in the video, so the viewer is inclined to wonder if the agencies are indeed racist. This is a strong message – it could dominate as a takeaway. Now, imagine you are a public servant who’s trying to clean up pollution. And a research team comes along and tells you that the black community thinks you purposefully neglected them. Will this create a meaningful dialogue between agencies and the black community? Or will agencies feel misunderstood and turned off by the research project? Do you feel comfortable to just drop that statement out there without context? I’m happy to talk about this more with the team. I’d like us to find a way of accomplishing reporting goals without unnecessarily incriminating the agencies.*

We agreed to keep this quote in the documentary for the reflective interviews under the pretense that we strongly state that these statements represent perceptions and are not necessarily facts. We felt that keeping this statement in the video for the reflective interviews would be much less risky since researchers can guide the conversation and ensure that it does not spark undue controversy. We are still in the process of figuring out what to do with this quote. It sparks an ethical dilemma for the researchers in perpetuating structural racism or creating undue animosity between government agencies and marginalized communities.

### **3.2.2: Social constructions of environmentalism**

At the very core, perhaps the contested statement between the Lincoln Park community member and governmental agency may stem from different constructions of what constitutes nature and environmentalism. The environmental justice and Euro-American constructions are at odds. This core distinction is important to recognize when conducting community-based research, community outreach efforts, and perhaps in the project design itself. While this view is certainly gaining more traction, bringing environmental issues within the purview of where we live, work, and play — of where we *are* rather than *are not* -- helps to heighten the saliency of different environmental projects and priorities in relation to the inequalities faced by low-income minority communities (Alkon, 2008).

In one conversation, an interview participant observed that minority groups can be found on the peripheries of the park where the space is designed and used for sports and picnic gatherings, but it is uncommon to find the same ethnic and racial makeup of people at the riverfront hiking, bird watching, or boating. If we consider the different constructions of nature, the distribution of the who uses the park and where, this makes sense. The Lincoln Park remediation site has been restored back to its natural form and function. A Euro-American construction of nature may be excited and eager to visit and experience

this piece of urban nature. In contrast, this restoration does appear to be a space to live, work, and play, rather, it is seemingly something outside of that scope and perhaps exclusionary from a minority point of view. There is seems to still be a critical gap between the intentions of urban nature and nature as the place where we live, work, and play. The remediation site is located in an urban area and surrounded by densely populated neighborhoods – yet still may seem like a place where nature is “out there” despite the fact that it is in the midst of a predominantly African American community.

### **3.2.3: Research ethics amidst the police shooting of Sylville Smith and subsequent riots**

The shooting of Sylville Smith generated outrage and debate across the U.S. and sparked two nights of riots in Milwaukee’s Sherman Park community. The Milwaukee community was dealing with the trauma of the shooting and riots, leading the research team to engage in dialogue about the most ethical, productive, and respectful way to continue Urban Environmental Equity research. Internal email communications raised a number of ethical concerns for the community, research team, and involved government agencies: 1) the physical and mental safety of research assistants, 2) concern for the way the documentary will be received by the community, 3) concern that this will impede graduate student and professor timelines for graduation and tenure, 4) being discredited by community members as we are not considered insiders, and 5) the paradox of doing nothing. The following quote is from email discussions between the research team and details the many elements of concern for how the documentary and research might be received by the community.

*Concern for the way that the unfinished and finished documentary products will be received. The results of the process are a documentary film that aims to democratize participation in public agency planning processes beyond what can normally be achieved through public hearings or meetings. To do this, we must act to support or enhance levels of trust between public agencies or groups that are doing environmental improvements and the public at large. What we don’t want to do is actively dismantle communication pathways or seed unfounded animosity of conflict. We also do not want to erase or de-politicize racial conflict from the narrative of Milwaukee. We were aware of and are negotiating this potential conflict all through the project. In particular, there is a woman in the documentary who says, “there is a part of the enjoyment they cut out” [R4]. This is potentially controversial as our current funders are concerned that some people may interpret that to mean that there were overtly racist practices being used by the EPA and WDNR to decide where and how to clean-up the river. Included in our overall concerns regarding the documentary are the following sub-concerns:*

*Concern that including discussions of race in publicly available versions of the documentary may be used out of context to reinforce calls for violence. We become part of the problem in an acute sense.*

*Concern that removing discussions of race from the documentary will further entrench institutional forms of racism because the reality of affected populations is ignored or erased. We become part of the problem in a chronic sense.*

*Concern that ending discussion of race now (without conducting additional interviews or referencing the ongoing community trauma) will reinforce narratives that the environment and humans are*

*separate and will essentially limit the potential for the research to be interpreted with any validity or any resulting final documentary products to be legitimate to public planning. If we put out the product right now, it would not be reflective of the time. Our work becomes irrelevant to the scholarly community as well as the communities of activists and public officials who want to improve environmental and social justice conditions in the city.*

*Concern that if we don't publish the documentary with racialized content in it we are not being honest to our data or our personal ethics or the research framework we chose for the project. The results of the process are a documentary film that aims to democratize participation in public agency planning processes beyond what can normally be achieved through public hearings or meetings. When trauma happens we are fed through the news and media a very small reality and very few people get to contribute to that narrative. Addressing it would not only be the responsible thing to do but would give an outlet to a lot of people who otherwise wouldn't have one. Our research isn't perfect, but it has the potential to contribute something to that.*

*Concern that even if everything goes well, we are burdening respondents by asking them to participate now because they are experiencing trauma and our work is either irrelevant given more urgent and important concerns and/or is a triggering event that forces them to re-experience trauma.*

This is just one example of the lengthy discussions had by researchers. There are many elements to consider when conducting CBPR and often negotiating this delicate balance is difficult since there are no guidelines for situations such as these. This event and our concerns for the impact of the project on the community needed to be handled with care and sensitivity to the community, ultimately, we decided to pause the research process in order to continue the research while still upholding the “everyday ethics,” values, and purposes of CBPR methods (Banks et al., 2013).

### **Next Steps for the Urban Environmental Equity Project**

While the Milwaukee portion of the Urban Environmental Equity project was not able to be ethically and respectfully completed within the timeline of a two-year master's degree, I suggest the following next steps for moving forward and completing the CVM in Milwaukee in a way that benefits all parties.

1. Move forward with hiring a Milwaukee-based research assistant to recruit younger, minority (including African American, Latinx, and Hmong) interview participants from the Lincoln Park neighborhood to increase the robustness of the sample.
2. Partner with local Milwaukee research institutions (University of Wisconsin-Milwaukee) and groups to pursue additional funding and perhaps another graduate student or undergraduate researcher.
3. Integrate new interview data into the documentary where fitting.

4. Host a community-wide viewing and open discussion of the completed documentary and make available online as a resource for local residents and decision-makers.
5. Disseminate video and technical report to relevant government agencies, non-profits, and other decision-making entities.
6. Publish CVM results and process-based lessons-learned in a relevant and accessible peer-reviewed journal.

## **Conclusions**

CBPR projects have great potential to enhance sustainability and environmental justice scholarship and on-the-ground initiatives, yet ethical dilemmas and hurdles in the CBPR research process present opportunities to discuss and reflect upon the impacts of CBPR. While this research is not yet complete, that is not to say it was unproductive. Challenges with minority recruitment and ethical dilemmas emerged throughout the implementation of CBPR research in Milwaukee, forcing us to address tough, but worthwhile, topics and work through issues that likely would not have otherwise been discussed. Though the process is not complete, what we have learned through conducting interviews, forming the documentary, and conducting group interviews is invaluable for agencies, researchers, and the community alike. The importance of disseminating these results thus far helps to enhance the future steps not only for the Urban Environmental Equity project, but also for other researchers encountering similar challenges in CBPR.

Using CBPR methods to better integrate environmental justice concerns into environmental improvement projects can bring about new opportunities to design and manage projects within its funding or regulatory scope to leverage community needs. In our case, it highlighted many of the deeper, undercutting issues affecting life in Milwaukee. Though the intentions were to discuss the Lincoln Park remediation, it turned out that the community had a message better suited for other change-making entities. The CVM and other CBPR methods provide invaluable information about affected communities that can only be learned from the community members themselves. As researchers, we need to be aware of the ways we conduct and present research. For instance, we found examples of structural and institutional racism in Milwaukee that need to be addressed to improve environmental protection and human welfare. While the researchers and agencies involved can't necessarily solve this problem, we



cannot feed into the system of erasure that disregards the opinions and lives of people of color. If sustainable development projects seek to truly incorporate social equity concerns among environmental and economic concerns, it would behoove researchers and agencies to include CBPR not only to gather information for how to better the project, but also to empower and strengthen the community capacity and relationships between.

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## CHAPTER 4

### Conclusion

CBPR core principles complement just sustainability theory and can be used to merge environmental justice and sustainability efforts together. Empowerment, community capacity, and trust are all key to more holistic, just, and equitable decision-making. The practices and processes involved in CPBR contribute just as much value as the findings of the studies to the advancement of scholarship and activism alike. The implementation of one CBPR method – the Community Voice Method – gave insight into stakeholder’s construction of theories of change (Chapter 2) and instigated productive debate and discussion about the hurdles that come with conducting research in a constantly changing and evolving social context (Chapter 3). Unearthing the differences and similarities between stakeholders’ theories of change allows us to begin to understand what causes the mismatch between environmental justice and sustainability priorities. Both theories of change and process-based lessons learned led to valuable insights and conclusions that could not have been drawn through top-down, expert driven research. While turning the research process upside down and learning from the community itself may create more challenges – and perhaps questions that no one can answer yet – these are exactly the issues that must be brought to the fore to be discussed and handled in a way that uplifts and disrupts patterns of environmental, social, and economic disparity.

## APPENDIX A

### Private links to Parts I-III of the Milwaukee Documentary

Part 1: <https://uofi.box.com/s/rpfsediy8ipw7om1ouy6iifc7lq2lsra>

Part 2: <https://uofi.box.com/s/66jenjrcrpi9zl7x4rsj49rjls2n7ezs>

Part 3: <https://uofi.box.com/s/hfduzfdzwxz2w924e1jry7xuelv6xl8a>