ENVIROMENTAL JUSTICE IN THE URBAN LANDSCAPE

Written for POL S 333

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ABSTRACT Environmental justice is a crucial subfield within environmental politics. Environmental justice studies have often been focussed on sites of natural disasters; however, more recently the scope of environmental justice study has been expanded to include environmental justice in urban locations. First, this paper contains a literature review of prominent scholarly articles within the field of environmental justice, including historical examples of environmentally unjust policies, and the factors influencing environmental injustice. Next, this paper examines case studies of environmental hazards within North America. Finally, this paper makes policy recommendations to mitigate environmental injustice through a Canadian federal context such as mandating the creation of environmental justice assessments, in the Canadian provincial context, by encouraging the creation of an environmental justice framework, as well as through a municipal context, by encouraging the creation of an environmental justice assessment to create equity within city planning.

INTRODUCTION

One of the prominent fields of study within ecology is environmental justice, and a major element in the field of environmental justice is environmental racism. Robert D. Bullard (2001) describes environmental racism as “any policy, practice, or directive that differentially affects or disadvantages (whether intended or unintended) individuals, groups, or community based on race or [colour]” (160). More broadly speaking, environmental justice uses the same definition as environmental racism, with the inclusion of additional factors, such as income. There have been many studies looking into environmental injustice near sites of industrial production, as well as waste management and disposal sites. However, more recently, environmental justice studies have focused on urban areas as a whole and how environmental impacts are spatially and socially dispersed within the urban environment. This paper will take a more in-depth look at environmental justice in the urban landscape, first by introducing environmental racism and urban ecologies, and then by examining urban racism and injustice through a series of North American case studies. Finally, concluding policy recommendations to mitigate environmental justice issues will be made.

DEFINITIONS AND CONCEPTS

First, I will lay out the basic concept of urban ecology. Given that the focus of this paper is environmental justice in the urban landscape, urban ecology must be considered. Where people live matters when comparing location to exposure to environmental hazards, or when comparing location to socioeconomic indicators such as race or income. Further, ecology and urban landscapes are increasingly interlinked. Suburbanization has led to inequitable distributions of environmental harms between neighbourhoods and communities, as well as policy inequities – sometimes unintended – that occur within cities. For instance, some policies may unintentionally favour predominately white neighbourhoods, while unintentionally

neglecting racialized neighbourhoods (Buzzelli 2008a, 506). Two main variables used to discuss environmental injustices are race and income. It is important to note that economic conditions in racialized communities in North America tend to be worse off (Arthur 2021) than white communities, meaning that these two variables are not inseparable. Next, I will look to define environmental justice within the context of environmental racism and urban landscapes.

Having looked at Bullard's (2001) definition of environmental racism, I will turn to his explanation of the environmental justice movement, which is a key player in environmental anti-racism. Bullard (2001) explains that the environmental justice movement seeks to prevent environmental threats, as well as "[incorporate] other social movements that seek to eliminate harmful practices (discrimination harms the victim) in housing, land use, industrial planning, health care, and sanitation services" (153). Environmental racism tends to mirror power structures within urban landscapes. In the United States, African American communities as well as Latinx communities which are socioeconomically disadvantaged also have a lower level of economic and political power to affect change (Bullard 2001, 159) and therefore are disadvantaged by power relations through land use and zoning (Bullard 2001, 159). These structures of domination perpetuate environmental injustices. As Bullard (2001, 162) points out, cities are uneven. There is competition between different areas, resulting in the subordination of low-income neighbourhoods to affluent neighbourhoods. Environmental racism also takes place outside of the city landscape. For instance, the deep south of the United States is significantly more exposed to environmental hazards, as are Indian Reservations across the nation (Bullard 2001, 163-4). Environmental harms often follow the path of least resistance, where impoverished communities are forced to choose between a lack of jobs and economic development, or underpaid jobs and pollution (Bullard 2001, 167). This demonstrates the exploitation of impoverished, usually racialized, communities by industry, which constitutes environmental racism.

ENVIRONMENTAL RACISM: INTENDED OR UNINTENDED PRACTICES

One example of overt racism in the urban landscape was the practice of redlining. Redlining had to do with the grading of mortgage security by banks and mortgage lenders. In the 1930s, the Home Owners' Loan Corporation (HOLC) graded the mortgage security of urban US [neighbourhoods]. In doing so, the HOLC engaged in the practice, imbued with racism and xenophobia, of "redlining" [neighbourhoods] deemed "hazardous" for lenders. Redlining has caused persistent social, political, and economic problems for communities of [colour] (Shaker et al. 2022, 1).

While redlining is now illegal, its implications are still visible in the urban landscape. Historically racialized communities in the United States suffer from a lack of investment in their community development. It is communities and neighbourhoods like these that provide an opportunity for predatory development from environmentally hazardous industries. As previously stated, these impoverished communities are forced to choose between a lack of jobs or environmentally hazardous jobs.

Historically, negative environmental externalities, such as higher exposure to pollution or natural disasters, have been more prevalent in areas with lower socioeconomic status (Buzzelli 2008b, 1). One of the main questions underpinning environmental justice is whether or not environmental hazards occur at a greater frequency in areas of lower socioeconomic status (Buzzelli 2008b, 2). Socioeconomic status can be measured by numerous indicators; however, the two main indicators pointed to are usually race and class. However, it is difficult to separate race and class in the United States, as decades of subordination and domination have driven

racial minorities into lower classes. Buzzelli (2008b) states that "structural forces, such as racism, account for both low status communities and technological hazards" and that "residential 'choice' is an abstraction" (3). While income is an important indicator in determining the spatial distribution of environmental hazards, it cannot be separated from race. There is the so-called *chicken and egg* argument when it comes to the spatial distribution of environmental hazards compared to income and race. This begs the question of which factor incited the other – do hazards concentrate in areas that already have a lack of political resistance, or do hazards *cause* this eventual lack of resistance by driving down property value and attracting individuals of lower socioeconomic status (Buzzelli 2008b, 2)? Regardless, it creates a vicious cycle wherein those with a lack of political and economic power are increasingly subordinated, having no way of fighting this subordination or breaking the cycle. This creates an interesting paradox when studying gentrification, which is another important aspect that should be considered as a part of urban environmental justice.

Gentrification is the process through which wealthier people of higher socioeconomic standing move into inner-city, low-income neighbourhoods, displacing low-income residents and steeply increasing these neighbourhoods' rent gradients (Buzzelli and Jarret 2007, 205). If the process of gentrification had not occurred, the variable of race may then become more prominent than income. Buzzelli and Jarrett (2007) make an important point about the future of policy adaptation for environmental injustice, stating that "what this means for future research is that each case study must be interpreted with place-sensitivity" (206). In the future, to ensure environmental justice, each location must be viewed through its unique characteristics. Next, I will analyze case studies of socioeconomic vulnerability to NO_2 pollution, beginning with Toronto, Ontario, Canada.

CASE STUDIES

The first case study I will look at is that of NO_2 pollution in Toronto. In research done by Buzzelli and Jarrett (2007), the authors attempted to identify correlations between socioeconomic status and exposure to ambient NO_2 pollution. This research took census data and compared it to air quality reports of NO_2 around the city. The main result showed that "in general neighbourhoods marked by low education, lone parent families and low median income were more likely to have higher NO_2 exposure" (Buzzelli and Jarrett 2007, 205). However, visible minorities were sometimes less exposed to NO_2 pollution than non-visible minorities, although this indicator was less robust than that of income (205). The idea that income is more directly related to environmental injustice than race illustrated a growing trend in the field of environmental justice. Buzzelli and Jarret's (2007) research also concluded that wealthy neighbourhoods in the inner region of Toronto also had higher exposure to pollution (205); however, I argue that this is an outlier within the Toronto study, as wealthy neighbourhoods in Toronto tend to be nearer to downtown (such as the neighbourhood of Rosedale) whereas the suburbs outside of Toronto tend to be more middle-income. This is different from the usual patterns of urban settlement in other major North American cities, where there has been an exodus of wealth from the inner city towards the suburbs, leaving those living in the inner city with less access to economic opportunities and wealth (Arthur 2021).

The next case study I will examine is that of a comparison between Vancouver, B.C., and Seattle, Washington. Su et al. (2010) undertook research similar to that of the Toronto case. What these authors found is that median income is the largest indicator of environmental injustice in Seattle (606). The authors also found that in Seattle, new immigrants were more exposed to nitrogen pollution (Su et al. 2010, 606), with this attributed to their clustering near industrial lands and highways. In Vancouver, immigration was less of a marker of exposure to pollution than it was in Seattle, due to ethnic enclaves located away from industrial lands

(Su et al. 2010, 606). Continuing in the realm of American cities, the next case that I will analyze concerns hurricane damage in Houston, Texas.

In Houston, Texas, researchers compared the exposure to the environmental hazards of flooding due to Hurricane Harvey against socioeconomic status, specifically the variable of race. Chakraborty, Collins, and Grineski (2019) explain that when comparing the mapped locations with the largest extent of flooding, these maps "suggest a spatial correspondence between flood extent and the non-Hispanic Black and Hispanic proportions, as well as socioeconomic deprivation" (247). The authors also stated that race or ethnicity and flooding were "significantly and positively correlated with the proportion of non-Hispanic Blacks and Hispanics" (Chakraborty, Collins, and Grineski 2019, 247), however, these variables were negatively correlated with white populations (247). In this analysis, the groups that were most affected by floods were African American, Latinx, and the socioeconomically disadvantaged (247). According to Chakraborty, Collins, and Grineski (2019), the areas of Houston that were the most prone to flood damage sat along the Gulf of Mexico, with the areas less prone to flooding sitting more inland (247). When comparing this with the conclusion made by the authors discussing the relationship of socioeconomic vulnerability to flooding, it can be shown that properties inhabited by those who are socioeconomically disadvantaged sat in the low-lying areas of Houston which are prone to flooding (247). The researchers also mentioned that racialized communities are more likely to suffer the negative effects of environmental hazards that persist past the hazard event, such as physical and mental health effects (249). This can be due to a lack of access to insurance, or the inequitable distribution of the hazard effect itself (249).

POLICY RECOMMENDATIONS

It is important to note that policy measures to address environmental racism have thus far been insufficient. While this paper will discuss policy recommendations at a greater length in a later section, it is important to understand historical policy approaches undertaken to combat environmental injustice. Robert Bullard (2001) explains that in 1994, United States President Bill Clinton signed Executive Order 12898, which directs the collection of information regarding exposure to environmental hazards of low-income and racialized communities in the United States (152). While this was a good first step in addressing environmental racism, the majority of the policy surrounding environmental hazards in the urban landscape has been based on mitigating potential hazards. As Buzzelli (2008b, 7) points out, reducing environmental hazards does not necessarily reduce environmental injustice, as it does not address the policy causes of these hazards, nor does it address the intentional or unintentional aspects of environmental racism within these policies. In the subsequent sections of this paper, I will examine some case studies of environmental injustice in the urban landscape, as well as make urban planning policy recommendations to mitigate environmental injustice in the future.

There is a large void in municipal urban planning policy, as well as provincial and federal infrastructure and transportation policym that must be filled to address inequality and injustice in the urban environment. This policy must come from both the top-down and bottom-up because, in a federal system such as Canada, municipalities derive their power from the provinces, whose power is demarcated by the Constitution. While it may seem obvious that environmental justice within urban planning should come from municipal governance, it would be helpful to the cause of justice if an overarching framework from federal or provincial governments were to be implemented to direct the policy of municipalities. One notable example of federal policy in Canada is proposed Bill C-226 which will seek to address this injustice. Bill C-226 is a private member's bill sponsored by Elizabeth May, Green MP from Saanich-Gulf Islands. This Bill establishes "a national strategy to promote efforts across Canada to advance

environmental justice and to assess, prevent and address environmental racism" (Bill C-226, 2021). The established strategy includes a study examining the intersection between race, socioeconomic status, and environmental risk. The study must also contain statistics related to the location of environmental hazards, measures to advance environmental justice, amendments to federal laws about environmental justice, the involvement of interested groups in environmental policymaking, as well as compensation for individuals negatively impacted by environmental hazards (Bill C-226, 2021).

The other realm of policy that must be addressed is municipal policy and city planning. Charles Isaacs (2020) wrote a report on environmental racism and injustice in zoning laws in Chicago, in which he mentions a need for greater community engagement with the re-zoning and development process (394-397). Greater community engagement can take place through community meetings, town halls, and public testimonies. While this form of community engagement may seem labour-intensive, Isaacs notes that it has been shown to increase community engagement with municipal politics (2020, 395) which can help mitigate environmental racism by giving power back to communities. Next, I will make preliminary recommendations for policy approaches of municipal, provincial, and federal governments in Canada.

My first recommendation is directed to the federal government. The passing of Bill C-226 would be a major step toward incorporating environmental justice studies into federal infrastructure projects, as well as advancing the nationwide discussion on environmental justice. This federal bill would not only have implications for the way that environmental hazards are studied concerning their spatial distribution compared with race and income, but it would also establish a framework of understanding for provinces and municipalities to follow. The second recommendation that I will make is aimed at the provincial governments. This recommendation is to create province-wide environmental justice frameworks which are tailored to each province. For instance, the Province of Alberta should create an environmental justice framework that is focused on the oil and gas industry. Specifically, the framework should emphasize how oil and gas development affects rural First Nations communities, as well as how oil and gas transportation routes may follow paths of least political resistance. Thus, disproportionately affecting groups with a lack of political power of resistance, such as First Nations groups. My third recommendation is focused on municipalities. First, municipalities should adopt a greater community engagement with the re-zoning and development process, as discussed by Charles Issacs (2020, 394-397). Second, municipalities should adopt a social justice and equity framework into their city plans. City zoning should be tested against social justice and social equity principles before they are implemented. Using a social justice framework will allow for municipal zones and bylaws to be "[congruent] with the Canadian Charter of Rights and Freedoms" (Agrawal 2021, 3).

CONCLUSION

Environmental justice and environmental racism are key fields within political ecology. There have been many studies looking into environmental injustice near sites of industrial production; however, more recently environmental justice studies have begun to look at urban landscapes as a whole. People's location tends to be influenced by socioeconomic factors, making the study of location key. Some socioeconomic factors, such as income or race, lead to higher exposure to environmental hazards, constituting a form of environmental injustice. To avoid this, the federal government should adopt Bill C-226, which would be a major step toward incorporating environmental justice studies into federal infrastructure projects. Provincial governments should adopt province-wide environmental justice frameworks which are tailored to each specific province. Finally, cities and jurisdictions

should incorporate environmental justice analysis into their policy and city plans to mitigate environmental injustice and end environmental racism in the urban landscape.

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