Immigration, mobility, and environmental injustice: A comparative study of Hispanic people’s residential decision-making and exposure to hazardous air pollutants in Greater Houston, Texas

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ABSTRACT

The themes of immigration and mobility have not been adequately examined by environmental justice (EJ) scholars. This study addresses that gap by clarifying factors shaping Hispanic people’s residential decision-making and their associated exposures to cancer risks from Hazardous Air Pollutants (HAPs) in Greater Houston, Texas. In-depth semi-structured interviews were conducted with 29 Hispanic householders who had previously completed a structured survey, which was representative of Greater Houston’s population. Our research design enabled data collection from immigrant and United States (US)-born Hispanics living at high and low risk to HAPs. By using a comparative qualitative analysis approach to examine divergent experiences of Hispanic subgroups, we advance from the monolithic treatment of the US Hispanic population reflected in the extant EJ literature. Our findings reveal that key determinants of high HAP risks included economic constraint on residential locational options for both US-born and immigrant Hispanics, and attraction to sociocultural benefits in co-ethnic enclaves among immigrants in particular. In contrast, protective factors differed entirely between US-born and immigrant Hispanics. For US-born participants, the experience of upward-and-outward sociospatial mobility – coupled with detachment from the Hispanic community – generated lower HAP risks, while the experience of living in social isolation within a less-than-ideal rental unit was protective for immigrants. The pernicious, multiscalar nature of environmental injustice experienced by Greater Houston’s Hispanic immigrants is encapsulated by the fact that their pursuit of affordable and comfortable residential settings at the household level contributes to the reproduction of their collectively disproportionate HAP exposures.

Introduction

Environmental justice (EJ) studies have demonstrated that low-income and racial/ethnic minority groups are disproportionately exposed to urban environmental risks (Bullard, 1990; Brown, 1994; Linder et al., 2008; Mohai et al., 2009). However, the EJ literature suffers from limitations we address here. First, while quantitative studies provide evidence for the inequalities that certain social groups face, they cannot explain the processes that produce distributional patterns of environmental injustice. Qualitative research methodologies, less often utilized in studies of distributional environmental injustice, can reveal the workings of micro and macro processes in the production of unequal risks, as well as the mechanisms underlying the quantitative findings that orient much of the empirical literature on EJ (Ragin et al., 2004). Second, there has been a tendency to categorize Hispanic populations into one homogenous group (for exceptions, see Collins et al., 2011; Grineski et al., 2013). By making assumptions of within-group homogeneity, EJ analysts have failed to clarify how race and ethnicity intersect with other axes of social inequality in contributing to unequal risks. Third, EJ research has not adequately examined the roles of (im)migration and mobility among racial/ethnic minority groups in the production of unequal risks.

To address these limitations, we used qualitative methods to examine pattern-process linkages in the production of distributional injustices by focusing on the role of residential decision-making processes among Hispanic groups living at relatively high and low risk to Hazardous Air Pollutants (HAPs) in the Houston, Texas Metropolitan Statistical Area (“Greater Houston” henceforth). Quantitative research has demonstrated that the Hispanic
population of Greater Houston suffers disproportionately from environ-
mental injustices associated with HAP exposures (Sexton et al.,
2007; Linder et al., 2008; Chakraborty et al., 2014; Grineski et al.,
2014). For example, as the proportion of Hispanic residents in
Greater Houston neighborhoods increased, the level of HAP
exposures increased significantly, even after accounting for
socioeconomic status (Grineski et al., 2014). By clarifying
the factors influencing residential locational decisions among Hispanic
people that fundamentally shape their exposures to cancer risks
from HAPs, this study aims to contribute to the existing EJ body of
knowledge, which has surprisingly little focus on migration and
mobility (for exceptions, see Crowder and Downey, 2010; Grineski
and Collins, 2010; Schoolman and Ma, 2012; Raddatz and Mennis,
2013).

We address the following questions:

- Why do Hispanic immigrants and US-born individuals of His-
panic descent in Greater Houston live in areas with relatively
high levels of outdoor exposure to HAPs?
- What factors have led Hispanic people to and kept them living
within areas at relatively high risk to HAPs?
- What factors are protective for Hispanic people who live in
areas at relatively low risk to HAPs?

Migration, mobility and environmental justice

While academic research on EJ has continued to progress, immi-
grant communities (and topics of migration and mobility more
generally) have been under-emphasized. Only a handful of spatial
EJ studies have analyzed immigrant populations, and most of those
have done so quantitatively based on variables associated with
immigrant status available in census datasets (Hunter, 2000; Ma,
2010; Collins et al., 2011; Viel et al., 2011; Schoolman and Ma,
2012). Findings relevant to Hispanic immigrant communities show
statistically significant associations between linguistically-isolated
households and both large quantity waste generators and pro-
posed Superfund sites (i.e., uncontrolled or abandoned hazardous
sites that are on the National Priority List for remediation
(USEPA, 2014)) in the US (Hunter, 2000). This indicates that dispro-
portionate risks are associated with immigrant presence and a lack
of English-proficiency – factors not emphasized sufficiently in EJ
research. Thus, more research is needed to improve understanding
of forces that contribute to increased exposure to toxic environ-
ments among immigrant populations. This study addresses this
need by focusing on the mobility experiences and decision-making
of Hispanic residents in Greater Houston, and by distinguishing
between the experiences of immigrants and those born in the US.

While there is a need for more careful examination of migrant
populations and mobility in the EJ literature, emphasis on these
themes among EJ scholars coalesced in the 1990s (then dissolved
in the early 2000s) with the “chicken-or-egg debate”, which focused on ‘which came first, the disadvantaged racial/ethnic minor-
ity population or the toxic hazard?’ (Been, 1994; Anderton et al.,
1994; Pastor et al., 2001). The “chicken-or-egg” debate superfi-
cially focused on the temporal sequence of events leading to
unequal risks for minority groups. The underlying premise was
that claims of environmental racism could be evaluated by deter-
mining whether toxic facilities had been disproportionately con-
structed in minority communities or if minority populations had
selectively migrated to areas with already operating facilities. It
was assumed by some scholars that disproportionate siting indi-
cated the possible existence of racism while minority move-in
pointed toward “market dynamics” as explanatory. At a deeper
level, the debate exposed competing perspectives on how racism
operates in society (e.g., via intentional acts or historical–
geographical suffusion throughout institutions in society) and
how causality in socially disparate patterns of exposure to risks
should be evaluated (Pulido, 1996). Due to the polarizing nature
of the debate, the focus on mobility and migration in EJ research
was largely abandoned. EJ scholars, who typically adopt normative
positions, tend to avoid conducting research that can be harnessed
by others to support erroneous interpretations regarding racism’s
absence and/or justice’s presence. Empirical studies that document
racial/ethnic minority group movement and settlement within the
production of environmentally unjust urban landscapes are ame-
nable to erroneous interpretations, based on the logic that “minor-
ities are not being discriminated against in the siting process or
housing market; they are choosing to live in neighborhoods that
already host facilities” (italics in original) (Taylor, 2014: 86).

The “chicken-or-egg” debate exhibited similarities with the
context vs. composition discussion among health geographers,
which focused on the relative importance of place-based structural
features (contextual) vs. individual people’s characteristics (com-
positional) in shaping disparate health outcomes. An important
difference is that the context vs. composition discussion yielded
synthesis, whereas the “chicken-or-egg” debate did not. Through
the context vs. composition discussion, health geographers
deemed it necessary to examine both contextual features and com-
positional characteristics (Phillimore and Morris, 1991). In other
words, consensus emerged that taking into account the structural
features of places and the attributes of people were both important
for studying health disparities (Smith and Easterlow, 2005). We
assert that EJ scholars should follow suit and recognize the impor-
tance of examining both contextual and compositional factors that
influence the production of unequal environmental risks. A pre-
mise of this study is that EJ scholars cannot limit inquiry based
on the problematic “chicken-or-egg debate” any longer, and must
resume examination of the roles of mobility and migration as com-
positional processes that articulate with structured inequalities in
shaping sociospatial patterns of environmental injustice. Thus,
goals of this study are to reinvigorate the dialogue on migration
and mobility in EJ research as well as highlight the unjust risks
faced by immigrant populations within metropolitan America.

Environmental injustice in Houston, Texas

Greater Houston is the sixth largest Metropolitan Statistical
Area in the US with a total population of 5.9 million (2010). Accord-
ing to the 2010 census, Hispanics comprised 35% of the pop-
ulation, non-Hispanic whites, 40%, and non-Hispanic blacks, 17%;
nearly 80% of Greater Houston’s Hispanics are of Mexican-origin.
Hazardous Air Pollutants (HAPs) are a significant health threat in
Greater Houston because it is home to the world’s largest petro-
chemical complex and notorious for being the ‘plan-less’ city due
to its lack of zoning laws (Feagin, 1988; Linder et al., 2008). Health
problems attributable to HAP exposures in Greater Houston have
been well-documented (Whitworth et al., 2008; Lupo et al.,
2011; Scheurer et al., 2014).

There is a body of EJ work demonstrating environmental racism in
Houston, which for the most part has focused on blacks/African
Americans (Linder et al., 2008; Bullard, 1996; Vojnovic, 2003). Ot-
erers have questioned the existence of environmental racism in
Houston (see Been, 1994; Yandle and Burton, 1996; Denq et al.,
2000), either by highlighting methodological inconsistencies in
prior studies or through ‘market forces’ arguments highlighting
the movement of poor (and incidentally) minority populations into
hazardous areas subsequent to industrial establishment. Following
Pulido (1996), we assert that answers regarding whether people or
a pollution source arrive in a given place first fail to provide an ade-
quate basis for substantiating claims of environmental (in)justice.
One, these arguments are rooted in a flawed conception of racism