

AN ARCHAEOLOGY OF ENVIRONMENTAL RACISM
IN LOS ANGELES¹

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Abstract: This paper focuses on the historical evolution of discriminatory pollution patterns in Los Angeles. We argue that the historical processes leading to environmental racism cannot be understood without employing qualitative research methods. Moreover, in order to move beyond viewing "race" and class as mutually exclusive static categories, we conceptualize "race" and class as social relations. We first conducted a spatial analysis of air toxins in urban Los Angeles County and then chose two of the most polluted communities (Torrance and East Los Angeles/Vernon) for detailed historical analysis. Each community illustrates a different set of historical processes. The early development of Torrance was characterized by a highly deliberate and conscious set of racist practices on the part of city planners in an effort to control a racialized division of labor. In the case of East Los Angeles/Vernon, minority communities developed in close conjunction with those industries dependent upon their labor. The negatively racialized and polluted nature of the place led to its continued role as an industrial area. In both cases, we reveal the need to focus on the simultaneous evolution of racism, class formation, and the development of industrial landscapes.

INTRODUCTION

A key methodological problem posed by the environmental racism literature involves the question of which came first, the people or the hazard. This question is considered necessary to ascertain whether empirically measurable racism created patterns of disproportionate exposure, or whether such patterns are simply a function of larger social and economic structures and forces. Cutter (1995) presents the problem in the following way:

Were the LULUs [locally undesirable land uses] or sources of environmental threats sited in communities because they were poor, contained people of color, and/or politically weak? Or, were the LULUs originally placed in communities with little reference to race or economic status, and over time, the racial composition of the area changed as a result of white flight, depressed housing prices, and a host of other social ills? In other words, did the residents come to the nuisance or was the nuisance imposed on them (voluntarily or involuntarily)? (p. 117).

These questions are significant not only because they underscore the need for historical analysis, but also because they intimate other problems in current approaches to environmental racism research. In addition to a general absence of solid historiography, there is a tendency to treat the two primary categories of analysis within the environmental racism literature, "race" and class, as static categories, instead of as social relations; although this allows researchers to operationalize questions concerning "which came first" and to compare the significance of race and class in creating inequitable patterns, it does so only by ignoring the historical and spatial contingency of racial categories and the dynamic complexity of urban socio-spatial patterns.² By contrast, recent work in critical human geography has insisted upon conceptualizing urban space (Massey, 1994), economic relations (Gibson and Graham, 1992), and racial categories as active social processes (Anderson, 1987; Jackson, 1987; Kobayashi and Peake, 1994). In the case of environmental racism, this means, first, focusing on the *simultaneous evolution* of racism (versus race), class formation, and the development of industrial landscapes, instead of assuming linear causality (as in the question of which came first). In other words, we seek to uncover how peoples and places become racialized (the process of grafting a racial meaning onto various phenomena within the context of unequal social relations), how they are integrated into local economic structures, and the spatiality of those dynamics. Given this framework, places are not simply sites, but are relations themselves that partially constitute the landscape (Massey, 1994). Thus, instead of seeking the definitive answer as to whether environmental racism actually exists, an equally important research agenda is to study such processes.

This paper offers a methodological alternative to the current literature by emphasizing social relations and processes in the history of environmental racism in Los Angeles. We examined the distribution of air toxins in Los Angeles and then selected two highly polluted communities for further inquiry: Torrance and East Los Angeles/Vernon. Through historical analysis we reveal the processes by which these communities became disproportionately affected. We contest normative conceptualizations of race and class by approaching both as historically and geographically specific social relations that are spatially constituted. Thus, instead of defining class strictly in terms of income categories, we also consider the importance of the division of labor and one's relation to the means of production. Race is approached in a similar way. Instead of accepting racial groups a priori, we investigate the process of racialization.

We first summarize major methodological debates within the environmental racism literature, paying special attention to how race and class have been conceptualized. Second, we introduce Los Angeles and discuss the general problem of environmental racism, and, in particular, the geography of air toxins. Third, we trace

the evolution of land use, planning, and industrial and demographic patterns—situated within the larger political economy of Los Angeles—of Torrance and East Los Angeles/Vernon. By paying attention to the spatiality of racial groups, including how they are constructed and “classed,” we illuminate how race operates in the creation of place, and ultimately in the formation of inequality. Although we present only two case studies, we hope these empirical analyses will not only suggest the diversity of ways in which racism operates, but also stimulate further alternatives in environmental racism research.

THEORETICAL AND METHODOLOGICAL ISSUES IN ENVIRONMENTAL RACISM RESEARCH: AHISTORICISM AND THE OPERATIONALIZATION OF RACE AND CLASS

Recent reviews of the environmental racism literature point to the many methodological uncertainties that currently characterize this body of work (Cutter, 1995). As it is a relatively recent field of inquiry, it is inevitable that both conceptual and technical issues, such as scale of analysis (Anderton et al., 1994a and 1994b; Bowen et al., 1995; Cutter and Solecki, 1996), subpopulations (Lester et al., 1994), or equity criteria (Zimmerman, 1993), will be debated in order to reach consensus. Yet, even as quantitative approaches to environmental racism research become increasingly sophisticated, two issues stand out as being particularly intractable without a move to more qualitative forms of research: understanding environmental racism in historical context and understanding race and class as social relations. We will discuss each in turn.

The Value of Historical Research

There is a clear need for historical investigation to supplement studies of contemporary socioeconomic and pollution patterns (Cutter, 1995). It has been argued that troublesome issues of intent and motive can be discerned only through history. For instance, was a facility purposely located in a non-White community, or did the community subsequently become non-White through residential migration? While there is a growing number of historical studies (Been, 1994a and 1994b; Hurley, 1995; Krieg, 1995; Sidawi, 1995), only Sidawi (1995) has problematized race. He does so by uncovering the racialized (and racist) nature of a planned community's spatial and economic organization. Focusing on the local planning discourse, he traces how certain groups were cast as non-White, and were then excluded and exploited.

Been's (1994a) analysis of Houston landfills indicates some of the challenges posed by historical investigation. Most environmental equity research compares pollution and demographic (usually census) data, yet neither census tracts nor “racial”/ethnic categories have remained consistent over time.³ Accordingly, an in-depth historical analysis must rely upon an array of sources (Colten, 1988). Despite these data issues, several researchers have contributed important insights or methodological interventions by focusing on the history of places. For example, Hurley's (1995) study of air pollution in Gary, Indiana is significant in that he located his study within the context of the larger forces of urban development and industrialization. Krieg's (1995) study

of Boston suggests that, at times, racism may account for environmental inequities, while at other times, class does, depending upon how a place develops. Both studies are important in shifting the debate from whether environmental racism exists to uncovering *how* different populations become vulnerable to environmental hazards. We believe that the emphasis on process, rather than dichotomous outcomes, enables us to reconceptualize race and class as social relations. This reconceptualization, in turn, allows us to move beyond the limiting race-versus-class debate, which is based on static categories.

Dominant Conceptualizations of Race and Class

Research on environmental racism is similar to other forms of outcome or pattern research, such as studies of housing discrimination, in that it seeks to document spatial distributions—in particular, inequitable access/exposure to both positive and negative attributes. As mentioned above, while only a limited number of studies have examined how such patterns evolved, even fewer have sought to unpack those structures, forces, and categories themselves. There are two particular problems associated with the dominant conceptualization of race. First, racial categories are treated as fixed, and second, racism is conceived in a unitary fashion.

Because most positivist research on environmental racism relies upon the census and its categories, “race” is simply agreed to refer to those groups designated as minorities. While there is an obvious truth to this, such a practice also denies the fluid nature of racial categories (Menchaca, 1993; Rodriguez, 1994; Sacks, 1994). For example, it overlooks the fact that minority status is a historical product of struggle, not a given. Consider the case of Arabs. They are considered non-Whites in this society and undoubtedly face racism, yet they do not have minority status in the United States and are not considered minorities in most environmental racism research. Likewise, we routinely accept the racial category Black, for example, without considering how it is constituted. Certainly, one could argue that the oppression of African Americans is a national feature, but this contention ignores the fact that racial groups are also created and reproduced locally. This process of racialization is inherently spatial in that racism is a dynamic force in place-making, and places (at least in the U.S.) are inherently racialized. It is precisely these assumptions that need to be recognized as political processes and uncovered.

A second problem is posed by employing a unitary concept of racism, that is, assuming a single racism exists instead of multiple and distinct forms (Cohen, 1992). Because positivist environmental racism research often compares race and class as two distinct categories and pays only limited attention to process, racism is conceded only when race emerges as a statistically significant variable. Instead of focusing exclusively on statistical outcomes (albeit quite important), we must broaden our understanding of racism to acknowledge it as both an ideological and material force. Accordingly, there are many forms of racism, and they vary in terms of their content, nature, severity, ideology, and scale of operation. Allowing racist distinctions not only moves us beyond reproducing racism as a dualism (i.e., it either does or does not exist), but also allows us to understand how racism articulates with other relations to create unique places.

Seen in this way, there is only *racism* to be studied. Racism (including racial categories), however, can be fully grasped only by studying how it works in conjunction with other forces and processes to create landscapes of inequality. Thus, one of the tasks for geographers and others involved in environmental racism research is to focus on (1) the ways in which both non-White and White groups are constructed, (2) the particularities of racialization under a given regime of capital accumulation, (3) industrial formation, and (4) the racist nature of land-use planning and development.

By focusing on process and relations, it becomes fairly meaningless to speak of race or class, as we must now confront the racialized nature of the economy. In other words, how are various racial groups inserted into the local economy? To date, most research operationalizes class as income, which serves to reduce a complex relation to a static category. For instance, although Anderton et al. (1994b) employed a variety of economic variables, including types of work, these were not individually analyzed, but aggregated into a general socioeconomic standing. Of course, the obvious strength of using income categories is its ease of use in conducting large-scale quantitative analyses. Moreover, income *is* an important indicator of not only one's social status, but also one's general living conditions. Income, however, along with other Weberian indicators such as educational attainment or housing value, does not convey the full story.

Conceiving of class as a social relation necessitates a different type of analysis. The essence of a relation is that it can be understood only within the context of other groups or structures. Although the term *class* is frequently used to refer to a variety of phenomena, in this context we will use it to refer to workers who exist in opposition to capital. But class is not the only antagonistic economic relation that exists. Sayer and Walker (1992) have pointed out that the division of labor is a distinct but often ignored analytical category that offers a different set of insights. Although a large group may be designated as workers, there will be tremendous variation within that population according to their place in the division of labor. Different positions carry with them varying degrees of power, money, status, and security. Typically, the division of labor is structured along "natural" fractures, such as ethnicity and gender (Kobayashi and Peake, 1994).

Using such an approach, an alternative project is to investigate the racialized nature of the economy, its spatiality, how it changes over time, and the implications for vulnerability to environmental hazards.

RACE, CLASS, AND POLLUTION IN LOS ANGELES

Air Toxins in Los Angeles

Los Angeles has long had the worst air pollution in the U.S. Both smog and air-toxin concentrations are functions of the region's physical geography, as well as of the high numbers of automobiles and levels of airborne industrial emissions (Mann, 1991; Lents and Kelly, 1993). As the nation's largest manufacturing complex, Los Angeles County's industrial facilities emitted 19,182,911 pounds of air toxins in 1992, according to the Environmental Protection Agency's Toxics Release Inventory (TRI) (United States Environmental Protection Agency, 1994). Given that Southern California's economy is based on multiple industries, there is not a single industry that bears

most of the blame. Rather, there are a number of polluting industries scattered over several industrial areas. Nevertheless, considering the size of Los Angeles County and its total emissions, they exhibit a marked spatial concentration (Szasz et al., 1993). We found that 86% of the census tracts had no TRI emissions. Figure 1 illustrates southern Los Angeles County's White and non-White population by census tract, as well as the spatial distribution of air toxin emissions, based on 1992 TRI data.⁴

Several studies have suggested that minorities, particularly the Chicano/Latino population,⁵ are disproportionately exposed to environmental hazards in Los Angeles. A study by the United Church of Christ (1987) first revealed that uncontrolled hazardous-waste sites were concentrated in the East Los Angeles area, which historically has been associated with Chicanos/*Mexicanos*. An investigation by Burke (1993) focused on the total number of reporting facilities and found Latinos heavily burdened by air toxins. In fact, because of the racialization of the Los Angeles economy, she could not conclusively determine whether race or income was primarily responsible for such patterns. This is hardly surprising, because in Los Angeles, the poor *are* overwhelmingly non-White. Due to the sheer size of the Latino community (40% of the county population), as well as their role as low-wage workers (Morales and Ong, 1993), there is a significant overlap (or conflation) between poverty and non-White status. Looking at total emissions, Kay (1994) found that the "dirtiest" zip code in Los Angeles (actually in all of California) was surrounded by Blacks and Latinos.⁶ In contrast, Szasz et al. (1993) found a somewhat more complex picture. While class (income) seemed associated with TRI emissions, the role of race was less clear. However, when looking at the presence or absence of reporting facilities (vs. emission levels), race appeared to be significant, confirming Burke's finding.

Further evidence of environmental racism came in the 1980s when there were two attempts to place incinerators in non-White communities (Russell, 1989). First there was an effort to locate an incinerator in the then largely African American community of South Central (Hamilton, 1994). During this battle, a plan was revealed to place an incinerator in Vernon, adjacent to East Los Angeles (Gutierrez, 1994). Both of these incidents were instrumental in fostering consciousness of environmental racism in Los Angeles (Mann, 1991; Schwab, 1994).

Race and Class in Los Angeles

To understand the various ways in which environmental racism operates in Los Angeles, we must first consider the larger political economic context. Recent changes in national and international spheres have profoundly altered local relations of race, class, and space (Soja, 1989; Davis, 1992a; Valle and Torres, 1994). Southern California, like the larger U.S., has undergone a period of economic polarization (Harrison and Bluestone, 1988). In Los Angeles this process has been especially complex for a number of reasons. First, as a manufacturing leader, Los Angeles experienced not only a rather belated and painful deindustrialization, but also an uneven reindustrialization that has depended upon Latino immigrants (Ong and Blumenberg, 1992). The hemorrhaging of industry began after the 1965 Watts uprising as firms left the central city for White suburban areas. For many African Americans, and to a lesser extent Latinos, both of whom had just attained a foothold in

Fordist industries, this was a serious blow from which some communities have not yet recovered (Hamilton, 1990; Johnson and Oliver, 1993).

A second complicating factor is immigration. During the 1980s Southern California was the site of unprecedented immigration, not just from the historic sending areas of Mexico, but also from Central America (Chinchilla and Hamilton, 1992) and many parts of Asia (Ong and Azores, 1994). The influx of immigrants, a number of whom were undocumented, provided a vast reservoir of low-wage labor, contributing to a partial reindustrialization. In fact, there is a strong spatial correlation between Latino communities and manufacturing employment. Accordingly, a general pattern is emerging of growing income inequality overlain by a complex politics of race and ethnicity. At a gross level we can say that Whites (and some Asians) enjoy relatively high-paying jobs in the service sector, while non-Whites (Latinos, Blacks, and some Asians) occupy low-wage positions in manufacturing, service jobs, and the informal economy (Ong and Blumenberg, 1992).

These economic developments have been accompanied by dramatic spatial changes. Perhaps in the 1950s it was possible to caricature Southern California as having an Anglo/Jewish Westside, a Black South Central, a Chicano Eastside, and White suburbia, but the picture is now more complex. Although it is generally true that the central part of the city is largely devoid of Whites, as they have moved either to the coast or to the outer suburbs (see Fig. 1), the socio-spatial patterns of Los Angeles are far more nuanced. Such changes reflect not only the differential insertion of various groups into the Los Angeles economy, but also the spatial heterogeneity of each racial/ethnic group. For example, even though the Latino population of Los Angeles historically has been composed of Chicanos and *Mexicanos* living on the Eastside, the immigration of the 1980s introduced unprecedented numbers of Central Americans, some of whom continued to use East Los Angeles as a port of entry, while others settled in the Pico-Union area west of downtown (Chinchilla et al., 1993) and moved later into South Central.

South Central has been the home of Black Angelenos since the 1940s but is undergoing rapid transformation. Although it is often still considered a "Black place," parts of it are now 50% or more Latino (Turner and Allen, 1991). Despite Blacks and Latinos living side by side, and their general condition of poverty, each group is embedded in a different set of social relations. Latinos face the highest poverty rate in the city, largely because of low-wage work. The Black population is much more mixed. Even though Los Angeles boasts a sizable Black middle class, many African Americans remain mired in poverty because of both low wages and high rates of unemployment. There is growing evidence that Blacks and Latinos are racialized in different ways, leading to contrasting employment pictures. There is a perception among employers that Blacks are not good workers and have "bad" attitudes, while Latinos are seen as "good" workers, willing to work hard without complaint (Durazo, 1995; Waldinger, 1995; see also Kirschenman and Neckerman, 1991).

This is a clear example of how ideology and meaning work in the process of racialization. In this case, Latinos' historical and continuing role as low-wage workers has helped shape their construction as a non-White group, their residential patterns, social and economic opportunities, and vulnerability to particular environmental hazards. But even within the category Latino, there is significant diversity. For

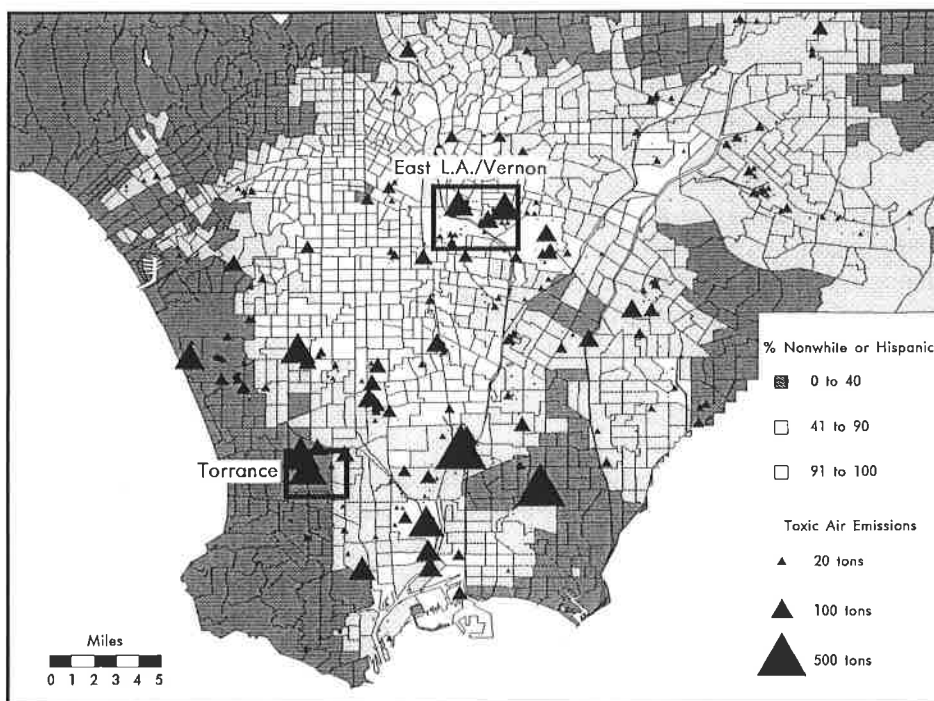


Fig. 1. 1990 non-White or Hispanic population by census tract and 1992 Toxic Release Inventory emissions, Southern Los Angeles County.

instance, there is growing evidence that Central American immigrants are far more militant and politicized than *Mexicano* workers, a situation that may have profound implications for Los Angeles as a whole (Lovato, 1995; Silton, 1995).

THE EVOLUTION OF ENVIRONMENTAL RACISM IN TWO LOS ANGELES COMMUNITIES

On the basis of Figure 1, we selected two of the most polluted areas for further analysis and investigation. These communities were selected primarily because of total TRI emissions. The area we have defined as East Los Angeles/Vernon accounted for 12% of the total county emissions in 1992 (2,242,976 pounds) and is composed primarily of small firms. In contrast, the northern portion of the City of Torrance contains large firms, including the third- and fourth-largest emitters in the county, the Mobil Oil Refinery and Reynolds Metals, and is responsible for 10% of total county emissions (1,856,777 pounds) (United States Environmental Protection Agency, 1994). In addition to having high levels of emissions, each area also represents a different historical trajectory: one is a planned industrial community, the other an amalgam of political entities with a more complex history of industrialization.

Having selected the two sites, we then constructed geographic boundaries around each community. The precise boundaries of each area were based primarily on the clustering of both total emissions and emission sites. Thus, we tried to maintain the

"industrial integrity" of each site as much as possible. Because of historically inconsistent census tracts, census data were used when appropriate, but were complemented by archival work, secondary sources, and site observations.

Each site brings into focus some of the complexity that surrounds the creation and interpretation of environmental racism. First, both sites suggest that standard spatial units of analysis can at times hide as much as they reveal, problems that can be resolved only through qualitative investigation. Moreover, each case reveals the different processes that may contribute to environmental inequities, suggesting that distinct forms of racism are at work. These range from the intentional siting of polluting facilities in non-White communities to the deliberate development of industrial areas in racialized minority urban spaces. Also included, however, are racialized structural processes, such as class formation, that are pivotal to understanding environmental inequity. Each case also illustrates the role of racial ideology. By paying attention to racial meanings and how they intersect with material structures and processes, we can better grasp the diversity and significance of the ideologies informing these larger patterns. This also serves to deepen and concretize our understanding of racism so that it is not limited to deliberate and malicious targeting. Finally, these cases dispel any notion of simple historical causality, i.e., whether the people or the hazard were there first. Instead, by emphasizing processes, we can appreciate how specific landscapes are composed of a series of mutually conditioning forces.

Torrance

Torrance is significant because at first glance, it would appear that non-Whites are not disproportionately exposed to the city's air toxins. Historically, Torrance has been a White city, and strict zoning since its inception in 1912 has kept residential land uses highly segregated from heavy industry (Phelps, 1995). However, the industrial district's toxic pollution historically has had a disproportionate impact on the city's Latino community, a pattern that persists today. The *Mexicano* residential area, historically known as "the Pueblo Lands" (Fig. 2), is inserted into the industrial district and is situated immediately downwind of Mobil Oil and Dow Chemical facilities. Because the community is much smaller than a census tract, it is easily overlooked in standard analyses, yet its existence as an environmentally marginalized community has become apparent during recent years. In a 1979 refinery explosion and fire it was the only community to be evacuated (Robak, 1979). By examining the spatial and socio-historical development of the Latino community, we can begin to understand how this pattern is a function of racism and the spatiality of that racism. The Torrance case specifically demonstrates how a planned industrial suburb created a racialized division of labor that was expressed both in a racist planning discourse and in extreme residential segregation.

Originally conceived in 1911 by a consortium of investors hoping to create an open-shop alternative to Los Angeles's existing industrial district, Torrance was designed by its developers to attract both industry and White workers (Phelps, 1995). Anchored by a subsidiary of Union Oil Company, the development attracted several other large industrial firms, including the Pacific Electric Shops and the Llyewellyn Iron Works. City-sponsored advertising campaigns aimed at attracting White resi-

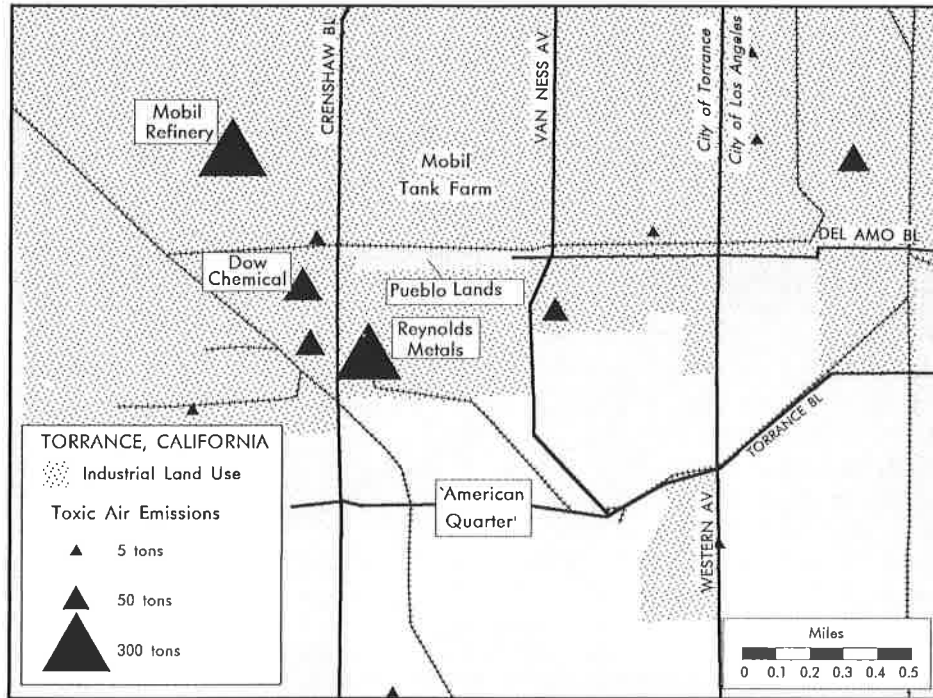


Fig. 2. Industrial land use and 1992 Toxic Release Inventory emissions in the Torrance study area.

dents stressed that Torrance would be "America's first great industrial garden city" where "flowers and sunshine and a little bungalow seem possible for everyone" (*Torrance Herald*, 1914, p. 1). The city's salubrious and orderly environment was also emphasized. An advertisement by the Torrance Realty Company in 1914 promised a "perfect sewer system . . . wide, beautifully paved streets . . . [and a] big, clean organized development" (*Torrance Herald*, 1914, p. 1). By 1922, the city had attracted over 1,000 residents, 95% of whom were White.⁸

Even though Torrance was conceived and marketed as a White workers' paradise, a small percentage of factory positions was reserved for non-White workers, primarily of Mexican origin. That *Mexicano* workers were referred to as "Cholos and other low-grade laborers" (Olmsted, 1912) "needed in the rough work of the factories" (Bartlett, 1913, p. 312) suggests a racialized division of labor. As was typical in Los Angeles industry at the time, positions associated with high skill and wage levels were reserved for White workers, while many positions associated with low skill and wage levels were reserved for Latinos (Romo, 1983).

Closely linked to the racialized division of labor was the creation and enforcement of racially segregated residential areas (Fig. 2). Evidence from planning documents reveals a highly deliberate confinement of Latino residents to a district otherwise zoned for heavy industry. Planners' racial stereotypes, such as "Mexicans like to . . . be out of sight of 'Gringos'" and "they do not care for grass or garden plots" (Fellows, 1912), provided a discursive basis for the creation of segregated environments. The spatial separation between racial groups, with industrial land use serving

as a buffer zone, was legitimized "to guard against possible race antagonism" (Willard, 1913, p. 302). The segregation set forth by the planners was subsequently enforced by racially restrictive covenants on real estate and a general atmosphere of intimidation, including a police department with close ties to the Ku Klux Klan (Shanahan and Elliott, 1984). A racialized division of labor within a city generally hostile to non-White residents underscores the historical interconnectedness between one's economic position, the creation and reproduction of racial categories, their spatiality, and how all three are mutually constituted.

During the 1940s and 1950s, Torrance partook of Southern California's larger industrial and population expansion, as it developed into one of Los Angeles's largest bedroom suburbs. Nevertheless, it remained an overwhelmingly White city. Of 22,000 residents in 1950, 2% were Japanese, 5% were Latino, and, despite proximity to the rapidly growing African American communities near South Central Los Angeles, only 0.15% were Black (United States Bureau of the Census, 1952). Moreover, the general socio-spatial patterns imposed by the early developers held, with Latinos concentrated in the industrial northeast of the city and Whites in the housing tracts expanding to the south and west. By the 1950s and 1960s, Latinos had made tremendous gains in unionized factory employment, especially in the local steel and aluminum plants, as the earlier divisions of labor underwent some dissolution. Yet discriminatory practices in housing markets maintained the exclusion of Latinos and African Americans from most residential areas (Shanahan and Elliott, 1984). Thus, the particular mix of forces that served to expose Latinos disproportionately changed over time.

In the 1970s and 1980s, metals-related employment dropped markedly as regional employment shifted to aerospace and service industries (United States Bureau of the Census, 1970, 1980, 1990). This shift has refocused attention on the hazardousness of the remaining industrial facilities, most of which are petroleum and chemical related. The Mobil Refinery, for example, has become the center of a local political debate over environmental issues after a series of industrial accidents (Rae-Dupree and Schoch, 1991). Eventually the city sued Mobil to ensure stricter safeguards against toxic releases (Schoch, 1995). The Oil, Chemical, and Atomic Workers Union has blamed the increase in accidents at the refinery on the increased use of nonunion contract workers (Rabin, 1988), who are disproportionately Latino (Lee, 1990; Kochan et al., 1992). Although Torrance has become more racially diverse (Whites now constitute only 66.7% of the population) (United States Bureau of the Census, 1990), Latinos are still relatively concentrated in the industrial northeast and thus are more vulnerable, due to both their residential location and their unequal position in the factories.

The Torrance case study demonstrates how city planning and the racialized division of labor combined to create environmental inequalities early in the city's history. It also demonstrates how a multiplicity of forces—including housing discrimination, regional economic changes, planning ideology, and economic structures—complicates any effort to attribute environmental racism to a single cause or form of racism. Instead, the development of Torrance shows how social relations based on race intertwine with larger political economic processes in complex ways.

*East Los Angeles/Vernon*⁹

In the mid-1980s, the industrial city of Vernon was selected as a site for a major hazardous-waste incinerator. Charging that the area's residents were already burdened disproportionately by environmental hazards, the grassroots group Mothers of East Los Angeles (MELA) led a successful political struggle to block the incinerator's construction (Gutierrez, 1994). While the siting is often considered a clear case of environmental racism, the focus on a single siting decision itself belies the complexity underlying environmental inequalities. Once again, reliance on standardized spatial units is a problem. While it is true that the area generally suffers from severe air pollution (Kay, 1994), much is made of the fact that the most "toxic zip code" is sandwiched between Black and Latino communities. Such catchy phrases mask the fact, however, that the actual zip code is home only to 350 residents (92% of whom are Latino). In contrast, what is significant about Vernon is its proximity to the heavily populated *barrios* of East Los Angeles and Boyle Heights. Considering the magnitude of Vernon emissions, prevailing wind patterns, and proximity to freeways (City of Los Angeles, 1988; Pansing et al., 1989), the area we have defined as East Los Angeles/Vernon (Fig. 3) is one of the most polluted spots in Southern California. Here, public housing projects and apartment buildings are adjacent to highly hazardous and toxic metal-plating shops (Sahagun, 1989). Thus our task is to uncover how and why such a polluted area developed in close proximity to the region's largest *barrio*.

To understand the simultaneous evolution of industry, pollution, and racism in East Los Angeles/Vernon, we start with the original *pueblo* of Los Angeles, which has served as the entry port for Mexican immigrants since the 1850s. The *pueblo* was itself a highly segregated *barrio* and was the first site of industrial activity in the city (Griswold del Castillo, 1979). As *el pueblo* became more urban and industrialized, *Mexicanos* were displaced eastward, marking the beginning of the East Los Angeles *barrio* (Romo, 1983). Historically, the residential patterns of the Chicano/*Mexicano* population have been closely linked to particular industries, a fact that reflects their role as workers in a limited number of sectors (Sanchez, 1993). Sanchez describes the role of industrial development on both old and new *barrios* and the problems it posed for local *Mexicanos*.¹⁰

Mexicans could hardly settle down permanently in a community when control of their neighborhoods was firmly entrenched in the hands of Anglo American industrial and commercial interests. The residential practices of immigrants were always tempered by the zoning practices and labor needs of the city's establishment.

Indeed, as the Eastside *barrio* took shape, transportation and zoning planners were laying the groundwork for intensive industrial development in and around the new neighborhood (Olmsted et al., 1933; Sanchez, 1993).

Mexicanos were initially drawn to the Eastside by employment opportunities and a lack of strictly enforced building codes, making home ownership a possibility for some. The development of railroad yards in and around Boyle Heights, the early growth of light industries in Vernon, and the emergence of the pottery, brick, and clay

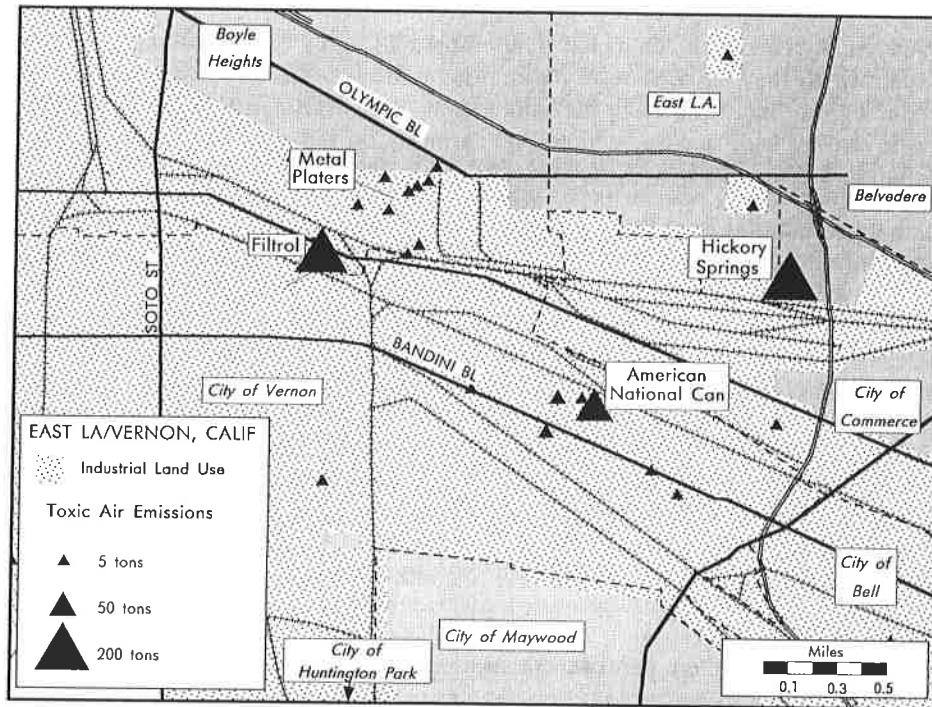


Fig. 3. Industrial land use and 1992 Toxic Release Inventory emissions in the East Los Angeles/Vernon study area.

industries adjacent to the Los Angeles River all led to a boom in the construction materials industry. As a result, the early Boyle Heights *barrio* was surrounded by railroad yards, brickyards, and light manufacturing (*Southern California Builders and Contractors*, 1917; Whiting, 1930; Kilty, 1963; Romo, 1983), all industries with limited occupational mobility but open to Chicanos/Mexicanos.

It is important to point out that the Eastside has not always been limited to Latinos. At different times it has also been home to vibrant Jewish, Armenian, and Russian communities, to name but a few (Sanchez, 1993). But beginning around 1940, Chicano/Mexicano in-migration to the Boyle Heights area increased rapidly. Chicanos/Mexicanos were drawn both by employment opportunities and by an older, relatively affordable housing stock, and whole blocks are reported to have changed from Jewish to Mexican in one week's time (Gustafson, 1940). Elsewhere in the expanding *barrio*, Mexican immigrants, described as living in an isolated cluster in "small dilapidated shacks on low flat land" (Gustafson, 1940, pp. 91-92), had located in the Belvedere area of unincorporated East Los Angeles. Known to residents as "La Barria," this area was marked as one of lower social status, and school boundaries were manipulated to segregate children.

As an increasingly segregated and industrialized *barrio* evolved, the people and landscape of unincorporated East Los Angeles became negatively racialized. A 1940 thesis depicted Boyle Heights in the following way:

Originally endowed with a charming topography and a climate with little fog, admittedly the finest in the city, the section could have been one of idyllic beauty, but it has been butchered by the hand of man. Yellow, eroded walls of earth line the streets, with shanties perched precariously on the eminences above, and huddled in the hollows (Gustafson, 1940, p. 20).

Such representations not only had repercussions for the future development of the area, but also served to limit Latinos' efforts to achieve some level of control and autonomy. For instance, County supervisors squelched an incorporation drive in 1931 because local commercial interests opposed being part of a "Mexican area" (Acuña, 1984). Police Chief Parker engaged in a less thinly veiled racist discourse in his explanation of Boyle Heights crime in 1960: "Some of the people have been here since before we were, but some are not so far removed from the wild tribes of Mexico" (Acuña, 1984, p. 89). Even a 1990 planning document notes, "The negative 'East L.A.' image deters new and existing employment" (L.A. Design Action Planning Team, 1990, p. 12). In short, the combination of a subordinated racial group and a dirty industrialized landscape served to characterize East Los Angeles as a highly undesirable place. Moreover, it should be clear that this landscape—its industrial nature in particular—developed partly because of the role of Chicanos/*Mexicanos* as low-wage manufacturing workers.

Although the northern part of the study area has been overwhelmingly Latino for several decades, the southern portion has a somewhat different history. The southern municipalities of Maywood, Huntington Park, and Bell were founded between 1906 and 1924 exclusively to house the White working class employed in the Fordist industries of Vernon (Shevky and Williams, 1949). Today, however, these cities are almost entirely Latino (Turner and Allen, 1991), as the White working class began leaving in the early 1970s. Whites left in response both to the decline of Fordist industries and to growing minority activism, including the Watts riot. Consequently, the racialized and aversive attitudes directed towards East Los Angeles/Vernon were extended to these areas as they became heavily Latino. This "image problem" has influenced not only the type of reindustrialization that has recently shaped East Los Angeles/Vernon, but also its legacy of industrial pollution. One analysis of economic development pointed out: "Cleaner industries are dissuaded from locating in the area because of the toxic contamination" (L.A. Design Action Planning Team, 1990, p. 12).

In effect, the image of East Los Angeles/Vernon as dangerous, polluted, and home to undesirable Latinos seems to have limited the area's economic options in the wake of deindustrialization. Other places in Los Angeles have had more varied redevelopment opportunities as housing or commercial areas after losing Fordist production (e.g., Fontana or parts of Downtown) (Davis, 1992a). However, the popular perception of East Los Angeles/Vernon as a negatively racialized and polluted area was one factor in precluding similar redevelopment schemes. Vernon elites have worked hard to attract even marginal economic activities in order to keep the real-estate market from collapsing in the wake of departing Fordist industry (Davis, 1992b). Moreover, the Los Angeles Community Redevelopment Agency (City of Los Angeles, 1993) believes that further development of "light" industry is the only logical and practical alternative for the Boyle Heights community. In its most recent industrial role, Vernon

has become a platform for post-Fordist craft specialty production. The auto, tire, and steel-related mass production industries that fled in the 1960s and 1970s were largely replaced in the 1980s by low-wage apparel, food, and furniture industries (Valle and Torres, 1994).

In addition to this type of reindustrialization, Vernon also has become more closely associated with specific hazardous and polluting activities. The 1995 Vernon Industrial Directory lists at least nine firms as "hazardous-waste processors." Moreover, many of the city's toxic air polluters are of relatively recent origin. A comparison of the 1992 TRI data and the 1961 Industrial Directory reveals that two-thirds of present reporting facilities have located in Vernon within the last 30 years.¹¹

It is within the historical context of the past 100 years that we must understand the highly publicized efforts of Vernon politicians to woo a large hazardous-waste incinerator and a hazardous-waste treatment facility in the late 1980s (Russell, 1989; Gutierrez, 1994). Vernon politicians were so eager for these facilities that they attempted to undermine public participation by requesting ad hoc exemptions to legal requirements for environmental impact assessments. Thus, what was widely cited as clear evidence of environmental racism *is* racism, but it cannot be reduced to a simple siting decision. As can be seen, decades of racist political economic history were embodied in that single event.

CONCLUSION

This paper has sought to demonstrate the need for historical research that moves beyond static categories of analysis in order to better understand environmental racism. We believe that environmental racism may occur in a wide variety of ways, but that it cannot be fully grasped until we dismantle essentialist ideas of race and begin to focus on racial meanings and structures, as well as on racialization and racism.

Both of the case studies we have presented show some of the limitations of dominant approaches to the study of environmental racism. First, it is difficult to make inferences about environmental racism as a *process* without detailed historical investigation. This means moving beyond not only studies of contemporary outcomes or patterns, but also studies that focus on events like hazardous facility sitings without acknowledging that racial and environmental meanings accumulate in places over much longer periods of time. Moreover, these meanings can and do change, as in periods of economic restructuring.

Second, both case studies suggest some of the problems inherent in employing standard units of spatial analysis. In the Torrance case study, the predominantly Latino community is isolated in a much larger industrial district, which itself is part of a larger census tract. In the East Los Angeles/Vernon case study, the most polluted census tract represents the industrial City of Vernon, while most affected residents live in neighboring tracts. The historical inconsistency of both standard spatial units and the definitions of racial categories presents additional difficulties for quantitative analysis. In any case, the inescapable tendency of quantitative studies to accord explanatory power to racial categories themselves, instead of to racism, is itself a reason to turn to more qualitative forms of analysis.

Most importantly, the case studies suggest that varying forms of racialization and racism operate over time and space, a fact that complicates the reduction of

environmental racism to discrete and measurable acts of discrimination. The early development of Torrance was characterized by a highly deliberate and conscious set of racist practices and ideologies. In this case, Latinos were disproportionately affected because of a complex pattern of employment and residential discrimination that became codified via the city planning process. Suburban industrial development involved the exploitation of a racially segmented labor force, which led to the residential confinement of Latino workers. In East Los Angeles/Vernon, the Chicano/Mexicano population arose in conjunction with certain industries dependent on their labor. The early industrial tone of the *barrio* continued as more Latinos came to the Los Angeles area and provided a ready pool of cheap, desirable labor. The racial meaning embedded in the *barrio* was very real, as East Los Angeles became a stigmatized place, which in turn limited its redevelopment options. Environmental racism thus cannot be understood except as deeply embedded in racialized processes of urban and industrial development.

Certainly we do not wish to negate the need for continued quantitative analyses of environmental racism issues, but we believe that such work needs to be complemented by more qualitative analyses that will not only increase our understanding of the processes underway, but also contribute to the larger field of urban geography.

NOTES

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²The terms "race" and "racial" are enclosed in quotation marks here and by implication throughout this article to highlight and to continuously problematize these terms.

³For example, the umbrella term "Hispanic" was not introduced into the census until 1970 (Oboler, 1995).

⁴Most studies consider only the southern portion of the county, as that is the urbanized section (Burke, 1993).

⁵The term "Chicano" refers to those of Mexican ancestry living in the U.S. *Mexicano* is a Spanish-language word that refers to those born in Mexico. "Latino" is a more inclusive term that refers to all people of Latin American origin, including Central and South Americans. Chicanos/Mexicanos are often distinguished from other Latinos because of their numerical dominance and long history in Southern California.

⁶We discuss the problem with this finding in the second case study.

⁷Analysis of the 1990 census data for Los Angeles County at the tract level reveals the highly spatialized nature of employment patterns and ethnicity. Our data show a correlation (Pearson's *r*) of .82 between the percentage of Latinos in a tract (using census variable p0080001) and the percentage of employment in manufacturing and manual labor categories in a corresponding tract (using census variables p0780010-p0780013).

⁸The percent White population in Torrance for 1922 was estimated by analyzing surnames listed in the *1922 Torrance Directory* (City of Torrance, 1922). By comparison, the U.S. Bureau of the Census (1922) reports that Los Angeles County was 78% "Native White" in 1920.

⁹This study area forms a tangle of various political jurisdictions, including the southern portion of Boyle Heights (City of Los Angeles), Belvedere (unincorporated Los Angeles County), and three small independent municipalities: Bell, Maywood, and Huntington Park. Fragmented local government has greatly complicated contemporary and historical struggles by residents to control land use in the area.

¹⁰For detailed discussions of Eastside Chicanos' efforts at incorporation, see Macias et al., 1973, and Acuña, 1984.

¹¹This calculation is based upon 33 of 71 current polluters that fall within the area of Vernon's 1961 Industrial Directory. Only 11 of the current 33 were established in 1961 (Vernon Chamber of Commerce, 1961).

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