Article

THE SCOPE OF LATINO/A ENVIRONMENTAL STUDIES

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Abstract

This article surveys the development of Latino/a environmental studies over the past decade of research and activism. It addresses issues, concepts, and controversies in four major areas of research including (1) theories and concepts of environmental racism and environmental justice, (2) environmental history and ecological politics, (3) case studies of Latino/a environmental justice movements, and (4) the political ecology of sustainable development. It describes Latino/a contributions to the environmental justice discourse and presents an overview of studies of rural and urban-based social movements. The article identifies gaps in the literature and outlines areas for future research. There is a need for critical studies on the nature of the Latino/a environmental justice movement, on the spatiality of social life, the environmental history of groups other than Chicano/as, and the dialectics of globalization and re-localization.

Keywords

environmental justice; environmental racism; sustainable development; social movements; environmental history; political ecology; risk assessment; traditional environmental knowledge

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For most of its intellectual history, Latino/a Studies has tended to overlook the spatial and ecological dimensions of history, culture, politics, and social life. Only in the past 10 years have ecological issues emerged as a major concern in the interdisciplinary field of Latino/a Studies. This essay outlines the field of environmental studies as developed from Latino/a perspectives over the past decade of research and activism. Latino/a Environmental Studies should not be reduced to the admittedly central discourse on the environmental justice movement (EJM). The field is broader and includes important contributions involving the methods and materials of environmental history, environmental anthropology, agroecology, political ecology, environmental ethics, and even restoration ecology.[1] This is not a comprehensive review of the literature; instead, this essay outlines the principal strands of Latino/a Environmental Studies while providing a socio-political and historical context for the various discourses which include:

1. *Theories of environmental racism and environmental justice*, including a significant body of research on the problematic of disproportionate environmental impacts and the role of legal and scientific expertise in the politics of environmental risk.
2. *Environmental history and ecological politics*, including critiques of racist constructs in the dominant histories of anthropogenic change and the articulation of revisionist histories.
3. *Case studies of Latino/a communities in the contemporary EJM*, including research on resource mobilization, organizational forms, terrains of struggle, movement ideologies, and the construction of identities and their roles in ecological politics.
4. *Political ecology of sustainable development*, including research on issues related to population, poverty, sustainable development, and place-based ecological knowledge (a.k.a. traditional environmental knowledge or TEK) with important contributions from ethnobiology, ethnoecology, agroecology, and related fields.

The essay closes with a discussion of critical gaps in the literature and outlines some emergent concerns in the field of Latino/a environmental studies.

The environmental justice paradigm and the politics of environmental risk

The environmental justice (EJ) paradigm represents a major shift in the direction of American environmentalism (Taylor, 2000). It questioned and challenged the different strands of American environmentalism, from

1 For an introduction to ecology and its relevance to the study of Chicano/a history, culture and politics, see Peña (2004) and especially Chapters 1 and 2.

the resource conservation dogma of Pinchot and the wilderness preservation ethics of John Muir to the post-1960s radical ideologies framed by the discourses of deep ecology, social ecology, ecofeminism, ecosocialism, and bioregionalism (Peña, 2003). EJ has redefined the political values of environmentalism in part by expanding the concept of the environment. Instead of viewing nature as a natural resource to be exploited or as a wilderness existing separate from humans, the EJ discourse has embraced the idea of nature as an environment co-inhabited by humans and other species (Peña, 1992, 1998, 2003a, 2004; Pulido, 1996a, b). For EJ activists, the environment is the place where 'we live, work, play, and worship' (Ortiz *et al*., 2002: 20).

The EJM linked environmental, economic, and social justice issues in a discourse on existing political ecological conditions of crisis, domination, and resistance. The underlying theory of the EJM has been centered on the critique of environmental racism. Environmental racism is defined as 'racial discrimination in environmental policy making' and involves 'the deliberate targeting of communities of color for toxic waste disposal and the siting of polluting industries [and]…excluding people of color from the mainstream environmental groups, decision-making bodies, commissions, and regulatory bodies' (Chavis, 1993: 3).

Environmental racism is posited as involving an inter-related set of political practices, power structures, and relations of domination (see Pulido, 2000: 12). The concept has led to an extraordinary variety of theoretical and empirical research that informs the strategies and tactics of the movement's numerous organizations. This research invariably involves critiques of environmental racism and support for a diverse social movement fighting for grassroots participatory democracy, economic and social justice, and ecological sustainability (for e.g., see Bullard, 1993, 1994; Faber, 1998; Agyeman *et al*., 2003). Much of early EJ research, conducted between 1990 and 1996, focused on documenting disproportionate adverse impacts resulting from patterns of environmental racism. This research supported the claims articulated by people of color that they were disproportionately harmed by environmental degradation (e.g., Bullard, 1993, 1994; Rechtschaffen and Gauna, 2002). Early EJ research focused considerable effort on the politics of environmental impact studies (EIS), which is a highly bureaucratic, expert-driven framework for the assessment of environmental risks.

Latino/a scholars and activists have made important contributions to the discourse on environmental justice. Some have challenged the prevailing concept of environmental racism, which they allege is not limited to the admittedly serious problem of disproportionate exposure to toxics in working and living spaces. Instead, environmental racism also

involves the targeting of communities of color for displacement or marginalization as a result of unsustainable patterns of development. Pulido (1993, 1996a, b, 1998) and Peña (1992, 1998) are among those who provided early criticisms of the EJ discourse and its tendency to focus on 'toxic racism.' Not all forms of environmental racism involve the disproportionate exposure of people of color to environmental risks and harms. These critics note that environmental racism also involves inequalities and conflicts related to the management of natural resources and specifically the loss of historic common property resources (CPRs) like land grants and the degradation of the environment as a result of the intrusion of extractive industries like logging, mining, and large-scale ranching. Gentrification, tourism, and infrastructure development have also been identified as critical issues affecting Latino/a communities (Pulido, 1996a, b; Peña, 1992, 1998, 2002, 2003a).

In the Latino/a scholarly community, the first peer-reviewed publication on EJ appeared in the early 1990s. Early contributions included a study of gender and mobilization in the struggles of the Mothers of East Los Angeles (MELA) against proposals for an incinerator and a prison (Pardo, 1990);[2] a historical and cultural ecological study of Ganados del Valle and its struggle against the State of New Mexico and mainstream environmentalists over access to communal pastures on the enclosed Tierra Amarilla land grant (Peña, 1992); a social survey of the attitudes of Chicano/a farmers and ranchers toward environmental issues related to mining and water resources development (Peña *et al*., 1993); a political ecological study of Chicano/a struggles against mining in the San Luis Valley (Peña and Gallegos, 1993); a study of pesticides, farm workers, and the international connection (Perfecto, 1992); and a historical and political ecological study of Ganados del Valle and the concept of sustainable development (Pulido, 1993).

2 It must be noted that Pardo (1990) did not utilize an environmental justice framework in her study of MELA and relied instead on a social movement theory approach.

A watershed event in the history of the EJM was the First National People of Color Environmental Leadership Summit held in Washington, DC (for the proceedings, see Lee, 1992; United Church of Christ, Commission on Racial Justice, 1992). The delegates at the Summit adopted the 'Principles of Environmental Justice' on October 27, 1991 (Box 1). The Principles of Environmental Justice (PEJ) have had a profoundly transformative effect on the direction of ecological discourses, the scope of environmental agendas, and the formulation of environmental protection policies. The post-Summit movement focused on three principal objectives: strengthening community-based legal, scientific, and political opposition to disproportionate adverse impacts; challenging and transforming environmental racism inside the EPA and the mainstream environmental organizations, that is, the

Box 1 The principles of environmental justice

PREAMBLE

WE THE PEOPLE OF COLOR, gathered together at this multinational People of Color Environmental Leadership Summit, to begin to build a national and international movement of all peoples of color to fight the destruction and taking of our lands and communities, do hereby re-establish our spiritual interdependence to the sacredness of our Mother Earth; to respect and celebrate each of our cultures, languages and beliefs about the natural world and our roles in healing ourselves; to insure environmental justice; to promote economic alternatives which would contribute to environmentally safe livelihoods; and to secure our political, economic, and cultural liberation that has been denied for over 500 years of colonization and oppression, resulting in the poisoning of our communities and land and the genocide of our peoples, do affirm and adopt these Principles of Environmental Justice:

1. Environmental justice affirms the sacredness of Mother Earth, ecological unity and the interdependence of all species, and the right to be free from ecological destruction.
2. Environmental justice demands that public policy be based on mutual respect and justice for all peoples, free from any form of discrimination or bias.
3. Environmental justice mandates the right to ethical, balanced, and responsible uses of land and renewable resources in the interest of a sustainable planet for humans and other living things.
4. Environmental justice calls for universal protection from nuclear testing, extraction, production, and disposal of toxic/hazardous wastes and poisons and nuclear testing that threaten the fundamental right to clean air, land, water, and food.
5. Environmental justice affirms the fundamental right to political, economic, and cultural and environmental self-determination of all peoples.
6. Environmental justice demands the cessation of the production of all toxins, hazardous wastes, and radioactive materials, and that all past and current producers be held strictly accountable to the people for detoxification and the containment at the point of production.
7. Environmental justice demands the right to participate as equal partners at every level of decision-making including needs assessment, planning, implementation, enforcement, and evaluation.
8. Environmental justice affirms the right of all workers to a safe and healthy work environment, without being forced to choose between an unsafe livelihood and unemployment. It also affirms the right of those who work at home to be free from environmental hazards.
9. Environmental justice protects the rights of victims of environmental injustice to receive full compensation and reparations for damages as well as quality health care.

Box 1 (continued)

10. Environmental justice considers governmental acts of environmental injustice a violation of international law, the Universal Declaration on Human Rights, and the United Nations Convention on Genocide.
11. Environmental justice must recognize a special legal and natural relationship of Native Peoples to the US government through treaties, agreements, compacts, and covenants affirming sovereignty and self-determination.
12. Environmental justice affirms the need for urban and rural ecological policies to clean up and rebuild our cities and rural areas in balance with nature, honoring the cultural integrity of all our communities, and providing fair access to all to the full range of resources.
13. Environmental justice calls for strict enforcement of principles of informed consent, and a halt to the testing of experimental reproductive and medical procedures and vaccinations on people of color.
14. Environmental justice opposes the destructive operations of multi-national corporations.
15. Environmental justice opposes military occupation, repression and exploitation of lands, peoples and cultures, and other life forms.
16. Environmental justice calls for the education of present and future generations which emphasizes social and environmental issues, based on our experience and an appreciation of our diverse cultural perspectives.
17. Environmental justice requires that we, as individuals, make personal and consumer choices to consume as little of Mother Earth's resources and to produce as little waste as possible; and make the conscious decision to challenge and reprioritize our lifestyles to insure the health of the natural world for present and future generations.

Adopted today, October 27, 1991, in Washington, DC

so-called Group of Ten or G10;[3] and building a cluster of activist networks.

The delegates at the first EJ Summit rejected the idea of establishing a national organization and opted for a network model. They chose the path of participatory decentralism against the centralized organizational structures of the G10. 'Building a net that works,' was the phrase coined by Richard Moore of the Southwest Network for Environmental and Economic Justice (SNEEJ) (Moore and Head, 1994; Almeida, 1998). Six regional and activist networks were established around the time of the 1991 EJ Summit or shortly thereafter (Table 1). Latino/a activists and community-based organizations participate in all these networks, but are especially active in the Farm Worker Network for Economic and Environmental Justice (FNEEJ) and the Southwest Network (SNEEJ).

3 The Group of Ten includes the Sierra Club, National Audubon Society, National Parks and Conservation Association, Izaak Walton League, National Wildlife Federation, Defenders of Wildlife, Environmental Defense Fund, Friends of the Earth, Natural Resources Defense Council,

Table 1 Principal Environmental Justice Networks (*C.* 2000)

Network	*Year founded*	*Geographic focus*	*Number of affiliates (est. number of local or regional groups)*
Asian Pacific Environmental Justice Network	1994	California, Hawaii	40
Farmworker Network for Economic and Environmental Justice	1994	US with focus on California, Florida, Midwest, Texas	8
Indigenous Environmental Network and international	1990	North America (US/Canada)	83
Northeast Environmental Justice Network	2000	New York, Massachusetts, Pennsylvania	NA
Southern Organizing Committee for Social Justice	1971	Alabama, Georgia, North and South Carolina, Mississippi, Louisiana	68
Southwest Network for Environmental and Economic Justice	1990	Arizona, California, Colorado, Nevada, New Mexico, Oklahoma, Texas, Utah	103

Source: R. D. Bullard. Ed. *People of Color Environmental Groups — 2000 Directory,* Atlanta: Environmental Justice Resource Center, Clark-Atlanta University, 2000; and author's own elaboration.
Notes: NA = not available.

and Environmental Action. Other important mainstream organizations include the Wilderness Society and the Nature Conservancy. For further discussion of the G10, see Pulido (1996a, b: 20–30), Merchant (1992: 159–162), and Gottlieb (1993: 117–161).

One of the most critical moments in this early history was the crafting of a letter sent to the G10 C. Earth Day in 1990 (see Rechtschaffen and Gauna, 2002: 21–22). The letter attacked the G10 for environmental racism. This included the exclusion of people of color from membership, staff, and leadership positions; the pursuit of a reform agenda that reinforced inequalities by focusing on the protection of wilderness areas and endangered species instead of linking these struggles with organizing around environmental problems that face primarily urban-based communities of color; and the persistence of direct links between G10 organizations and corporations. Latino/a organizers associated with the Southwest Network and the SouthWest Organizing Project (SWOP) were involved in drafting this important and historic letter, which led to profound changes in the nature of American environmentalism (Gottlieb, 1993).

The EJM produced limited but significant changes within the EPA and resulted in the implementation of Executive Order 12898, signed by President Bill Clinton on February 11, 1994.[4] The executive order

established guidelines for a federal environmental justice policy. It mandated each federal agency to make environmental justice a part of its mission 'by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States.. .'[5]

By August 1994, the Clinton Administration had appointed a National Environmental Justice Advisory Council (NEJAC)[6] within the EPA. This marked the new found influence of the EJM in national politics. If the underlying cause of ecological and social problems was environmental racism, the solution lay in the direction of a policy for environmental equity.[7] The environmental protection would be extended in an equal manner to all social groups without discrimination based on race or class. The implementation of 12898 and the establishment of NEJAC were capstone achievements of this strategy. Latino/a activists were among those appointed to the first incarnation of NEJAC; SNEEJ had played a critical role in pressuring the Bush and Clinton administrations to address environmental racism.

However, some theorists and activists rejected the environmental equity model because it fell short of embracing the PEJ and especially the Sixth Principle that calls for 'the cessation of the production of all toxins, hazardous wastes, and radioactive materials, and…detoxification and containment at the point of production.' The equitable distribution of environmental risks and hazards was the EPA's approach. It was a liberal reformist model and did little to alter the use of risky and destructive technologies or the oppressive power structure embedded in a corporate-dominated global market system (Peña, 1997: 306–308; Almeida, 1998).

Critics charged that equity approaches accorded primacy to scientific rationality, promoted a 'cult of expertise,' and derived from market-dominated values (Peña, 1997: 306–308; Peña and Gallegos, 1997). Risk is measured in purely quantitative terms and equity is achieved through the appropriate mix of administrative procedure and statistical analysis (see Rechtschaffen and Gauna, 2002). The bottom-line of this rationality is that ecological harm is an inescapable consequence of the capitalist production system. One can only mitigate impacts and minimize risks. If done equitably, then every social group gets the same amount of impact and risk. The PEJ proposed the adoption of a more radical preventative ethic calling for the cessation of the production of toxics and detoxification in the workplace. Any amount of risk, no matter how minimal, was deemed unacceptable.[8] The PEJ called for the radical transformation of capitalist technology and the autonomy of local communities against the tyranny of global market values, and its expert-driven politics of environmental risk assessment (Faber, 1998). Latino/a

4 The original text of Executive Order 12898 is available on-line at: http://www.epa.gov/swerosps/ej/html-doc/execordr. htm and part of a collection of government documents maintained at the homepage of the EPA's Office of Environmental Justice. For the EPA's programmatic response to Executive Order 12898, see Environmental Protection Agency, Office of Environmental Justice (1994a,b).

5 Executive Order 12898, p. 1; as posted on-line at the URL cited above, *supra* note 4.

6 The first meeting notice of the NEJAC is in 59 *Federal Register* 36,435 (1994). See Foreman (1998); Cole and Foster (2001).

7 The EPA (1992: 1) champions the equity model of environmental justice and defines environmental equity as 'the [equitable] distribution of environmental risks across population groups…While there are many forms of equity…[the EPA]…focuses on racial minority and low-income populations.'

8 This critique of the EPA policy on equitable management of

activists were among those leading the critique of the equity-based approach to the resolution of environmental racism (see Peña and Gallegos, 1997).

environment risk was evident at a meeting of EJ activists sponsored by the Ford Foundation as part of the 'Natural Assets Project.' Author's notes. Santa Fe, NM (February, 1998).

Latino/a environmental history

The field of environmental history in Latino/a studies emerged during the early 1990s. Prior to this period, writings in environmental history were dominated by white scholars including notable contributions by Donald Worster, Richard White, William Cronon, Carolyn Merchant, William deBuys, and Hal Rothman. The first Latino/a contributions in this field involved critiques of racist constructs in the discourses of environmental history (Peña, 1992; Peña and Mondragon Valdez, 1998; Peña and Martínez, 1998). These scholars noted the continued relevance of environmental history by implicating it as a factor in the framing of contemporary ecological discourses. They demonstrated how many radical eco-activists based their wilderness politics on racist assumptions about Chicano/as and other people of color. Radical environmentalists' understanding of the history of anthropogenesis – that is, human-induced ecological change – privileged Anglo conservation philosophies from Thoreau to Leopold and Carson over the quaint but ignorant cultures of native peoples (Peña and Martínez, 1998).

Southwestern environmental historians developed a literature on northern New Mexico and southern Colorado that was published during the 1980s and 1990s (e.g., deBuys, 1985; Rothman, 1989; Wolf, 1995). They tended to portray Mexican Americans as lacking conservation ethics and destroying the environment well before the arrival of the Anglos. In the archetypical tale, ignorant sheepherders overgrazed the Western rangeland in a Hispanic version of the 'tragedy of the commons.' However, the tragedy of the commons is really a tragedy of the commoner displaced from ancestral homelands (Goldman, 1993; Peña and Martínez, 1998). Reyes García (1998) countered with the idea of a 'homeland ethic' to explain the persistence of place-based conservation ideals in Chicano/a land grant communities.

The study of environmental history is significant because of its relevance to an understanding of the framing of ecological problems among contemporary stakeholders. Environmentalists of various persuasions and federal and state land managers have often used racist constructs of southwestern environmental history to argue against the restoration of stolen Spanish and Mexican land grants. Since Chicano/as lacked a conservation ethic, they cannot be trusted to responsibly manage restored land grants. It is in society's interest to support the scientific ecology of a heroic Forest Service that has protected the land

from the ignorant native people who would otherwise abuse it (e.g., Wolf, 1995).

Latino/a researchers offered ethnohistorical and ethnographic sources for a revisionist view of anthropogenic change and ecological struggles in the land grant communities of northern New Mexico and south central Colorado (e.g., Peña, 1998). They revisited the environmental history of logging, mining, and grazing to refute the flawed 'Hispanic tragedy of the commons' (Peña and Martínez, 1998). They demonstrated how ecological degradation in the bioregion had been largely the result of the advent of railroad mass markets, enclosure of traditional common use areas and the displacement of traditional users, forced proletarianization, and in-migration by Anglo newcomers (Peña and Martínez, 1998). The contributions of Latino/a environmental history suggest that large-scale environmental degradation of the United States was principally a consequence of the industrial capitalist ecological revolution. After 1848, the US capitalist political economy displaced the Native and Mexican American cultures from their historic homelands. This opened the way to massive and largely harmful ecological transformations (Peña, 1998, 2003a). The significance of this body of literature derives from the manner in which it demonstrates how contemporary patterns of environmental racism must be historicized. The roots of environmental racism in the present are to be found in structures and relations of domination resulting from the United States conquest and colonization of the so-called Southwest.

Latino/a communities in the contemporary environmental justice movement

The study of the Latino/a environmental justice movement ranges across a broad swath of organizational forms and terrains of struggle in rural and urban communities. A growing body of research reveals that the movement includes several 'sectors' or 'network clusters' (so named because of the nature of the relation between local affiliates and the EJ networks). These clusters include: (1) farm workers, (2) factory workers, (3) land grant communities, (4) acequia farmers, (5) urban barrio residents, (6) rural colonia residents, and (7) the overlapping of these groups in coalitions or networks. These clusters may include immigrant (foreign-born) or US citizen (native-born) Latino/a members. Bi-national or transborder coalitions and networks are also evident in the structure of the movement since at least the early 1990s and were, at least in part, galvanized by the oppositional movements to the maquiladora industries or NAFTA.

The terrains of struggle of the various sectors of the movement are outlined in Table 2. The 'terrains of struggle' in each cluster vary with the

Table 2 Network clusters and terrains of struggle in the latino/a environmental justice movement

Network clusters	*Terrains of struggle*
Farm workers	1. Workplace health and safety hazards • Pesticides and other toxic substances • Short hoe • Lack of potable water 2. Worker control of production to manage environmental risks 3. Worker-owned cooperatives 4. Revival of collective bargaining contracts 5. Emergent biotechnologies and environmental risk (e.g., genetically engineered crops, GEOs, and increased exposure to herbicides) 6. Farm worker housing, education, and medical care 7. Malnutrition
Factory workers	1. Workplace health and safety hazards • Toxic chemicals and fumes • Assembly line speed-up • Inadequate ventilation • Poor ergonomic design and hazardous machines • Sexual/sexist harassment 2. Violence against labor organizers, violence against workers (serial murders in Juarez, Mexico) 3. Worker control of production to manage environmental risks 4. Worker-owned cooperatives 5. Access to medical care
Land grant communities	1. Restoration of common lands of Spanish and Mexican *mercedes* 2. Restoration of historic use rights of land grant heirs 3. Citizen participation and co-management with USFS, BLM 4. Displacement by gentrification and subdivisions 5. Environmental and social impacts of military installations (Los Alamos National Lab) on land grants
Acequia farmers	1. Protection of water rights 2. Legitimation of acequia customary law 3. Watershed protection and restoration (from damage by logging, mining, subdividing) 4. Gentrification and the preservation of farmland, cultural landscapes, and open space

Table 2 (*continued*)

Network clusters	*Terrains of struggle*
	5. Cooperative economic development 6. Sustainable agriculture (organic certification; agroecology) 7. Community-supported agriculture for local food security
Urban barrio residents	1. Hazardous waste sites, solid waste dumps, incinerators 2. Lead and other toxic substances in homes 3. Toxic plumes in groundwater sources of drinking water; 4. Displacement of homes and businesses by freeway alignments and other urban infrastructure 5. Community-based public health 6. Community-owned economic development alternatives 7. Reclamation of urban common space 8. Social and environmental impacts of industrial parks (Intel) 9. Housing and urban habitat projects 10. Gentrification and affordable housing 11. Transit racism 12. Recycling 13. Urban horticulture
Rural colonia residents	1. Access to housing 2. Lack of potable water 3. Productive recycling 4. Sanitation systems 5. Contaminated soils in residential lots 6. Lack of access to health care
Overlapping groups	1. Politics and science of Environmental Impact Studies 2. Environmental racism and EPA accountability 3. Environmental racism in the Group of Ten 4. Military installations in rural and urban communities • Pollution of groundwater sources of drinking water • Soil contamination in residential areas • Impacts on local quality of life • Loss of historic settlement areas • Economic development impacts 5. Urban horticulture and local food security 6. Genetically engineered organisms (GEOs); No Patents on Life 7. WTO, globalization

Table 2 (*continued*)

Network clusters	*Terrains of struggle*
	8. Trans-border and bi-national environmental degradation and management (maquilas, NAFTA, transboundary pollution)
	9. Zapatistas and indigenous autonomy
	10. 'Just sustainabilities'

Source: Author's own elaboration.

political economic conditions and social position of each group, that is, their position in the racial and class formation. For example, the terrains of struggle among farm workers in California, Texas, Florida, and numerous other states in the Midwest and South focus on problems related to pesticide-poisoning incidents and other workplace health and safety issues or the need for collective bargaining rights (Pulido, 1996a,b; Pulido and Peña, 1998). Urban barrio residents in cities like New York, Chicago, Houston, Albuquerque, or Los Angeles focus on issues like the siting of hazardous waste sites, solid waste dumps, incinerators, and other locally unwanted land-use practices (Gandy, 1994; Camacho, 1998; Cole and Foster, 2001; Rechtschaffen and Gauna, 2002), while acequia farmers in northern New Mexico and south central Colorado focus on the restoration of land grants, the protection of watersheds from massive deforestation, and the defense of water rights and traditional forms of local self-governance.

Latino/a EJM embodies a wide variety of terrains of struggle, strategies of resistance, and organizational forms. Toxic racism and disparate impacts are part of these struggles, but the Latino/a EJM includes terrains of struggle related to land grants, water rights, and the protection of ancestral farmlands and watersheds. In rural northern New Mexico, gentrification associated with the Taos Ski Valley and 'art colony' has damaged acequias, farm lands, open space, and watersheds (Rodríguez, 1987, 1994; Peña, 1998, 2002). Recent advances in cyanide leach vat technologies, used in the processing of microscopic gold deposits, have led to a new wave of environmental risks and harms (e.g., the contamination of agricultural and domestic water sources with mine wastes, heavy metals, cyanide, and radionucleotides); all this comes on top of previous damage to watersheds from historic acid mine drainage (Peña and Gallegos, 1993).

Struggles over watershed protection in rural Latino/a communities certainly involve resistance to toxic racism. However, an increasing number of communities are facing displacement and ecological devastation from the 'amenity' industries. Toxic racism is combined with exotic

racism, which arises with the new and more 'sustainable' economy, based on tourism and nature–culture appreciation industries. Exotic racism consumes the landscapes and cultures of Latino/a rural communities as commodities for the amusement and enjoyment of tourists (Rodríguez, 1987, 1994; Peña, 1998). Tourism is driven by the growing consumer demand for natural and cultural spectacles. The bucolic scenery and 'quaint' local cultures are the basis of this new economy, and yet the inequalities of the system undermine that which tourists would celebrate as an 'exotic other.' Tourism increases the demand for development of acequia landscapes to build resorts, condominium clusters, shopping centers, roads, and other facilities. A real estate market for second homes emerges. Eventually, acequia-irrigated orchards and pastures become overvalued in a globalized real estate market that ruthlessly commodifies ancestral landscapes at $100,000 an acre (Peña and Martínez, 2000). The pressure to sell increases, as do property taxes. Land rich but cash-strapped locals are slowly displaced by newcomers and gawking tourists (Peña and Martínez, 2000; Gallegos, forthcoming).

Other EJ issues affecting rural Hispanos involve access to public lands for grazing of livestock and the survival of small-scale community-based logging and woodworking industries. In one of the few studies of Hispano 'public lands ranching,' Atencio (2001: 26) argues that without access to public lands – most of which were once part of the commons of the land grants – 'an age-old tradition, and an essential local economic pursuit,' will be crippled to the point of disappearance. Economic and cultural survival must go hand in hand (Atencio, 2001: 31). In the Vallecitos Federal Sustained Yield Unit, throughout the 1960s and 1980s, local Chicano logging workers battled the Forest Service and corporate timber company over the unsustainable volume of cuts. Then they found themselves under attack by environmentalists in the 1990s over the protection of the last old growth stands of Ponderosa pine and the habitat of the Mexican spotted owl (see Wilmsen, 1994; Forrest, 2001). Both of these cases point to the complex relationships between land-based Hispano communities, environmentalists, the state, and corporations as competing stakeholders in the management of the enclosed common lands of the Spanish and Mexican *mercedes* (also see Peña, 1998).

The persistence of place-based Mexican-origin communities in the southwest is a cultural and ecological legacy worth protecting and recovering (Peña, 2002). It is often overlooked that watershed protection became a major strategy of these communities not just because of the legacy of toxic racism and enclosure of commons lands. Watershed protection figures prominently in the political, legal, and discursive strategies of Latino/a EJMs against the cultural, ecological, and economic effects of the so-called new economy of tourism. It also derives

from the strong sense of place that Hispanos have developed over generations of living in this bioregion (Peña, 1998, 2002; García, 1998).

Latino/a EJ struggles in urban communities constitute the largest and most widely distributed segment of the movement. For example, in the New York City area, multiracial EJ groups like the Toxic Avengers and the Young Lords have long played a critical role in resisting toxic racism and other unjust land-use activities. The struggle by the grassroots group El Puente against the Brooklyn Navy Yard Incinerator is one among numerous such examples. The Toxic Avengers is an organization of young Latino/a students that was organized in 1988 to resist environmental racism. They are known for the successful struggle to force a glue factory, Van Man, known for its persistent violations of environmental laws, out of their community. At the First EJ Summit, the Toxic Avengers presented an important workshop in which they outlined and condemned the unethical intrusions of the mainstream environmental movement, which would 'assume ownership' of a local struggle only to use it to raise funds for the national organizations.[9] These organizations remain active and vital components of the urban-based Latino/a EJM and they continue to redefine the nature of the relationship between humans and the built environment (see Sze, 2003).

In Puerto Rico, the EJM has waged a wide variety of struggles related to the presence of the US military and the impacts of transnational corporations on urban and rural communities. In an important study, Déborah Santana Berman (1996: 83–84) notes that these struggles involve resistance against military expropriation, military toxics experiments, coastal privatization, mining, and rapid industrialization. These struggles have led to the formation of coalitions among environmentalists, nationalists, and anti-military activists. In a pattern reminiscent of Chicano struggles in northern New Mexico, EJ activists in Puerto Rico have resisted the growing tourism industry. Local people are often displaced by tourism-related development. A successful campaign against the development of a 'Club Med' resort in the unique tropical dry forest at Guánica, a United Nations-designated International Biosphere Reserve, is one example of these struggles (Berman, 1996: 85). The continuing struggle on the island of Vieques, which involves resistance to a bombing range operated by the US Navy, is an important example of the Puerto Rican EJM. Activists are concerned with the long-term health effects the bombing range has on the resident population, including reproductive illnesses and all types of cancers. EJ activists also embrace nationalist ideological perspectives that call for the independence and autonomy of the Puerto Rican people against the imperialist reach of the America military.

9 Based on author's observations in attendance at the Toxic Avengers workshop, First National People of Color Environmental Leadership Summit, Washington, DC (October 1991).

Watershed protection is an often-overlooked component of the Latino/a EJM, but it figures prominently in both rural and urban struggles. For example, the siting of a major Intel chip plant outside Albuquerque generated sharp responses from SNEEJ, SWOP, Native American tribes, and other organizations and communities of color (SouthWest Organizing Project, 1995). Throughout the 1990s, Latino/a and Native American EJ activists opposed Intel for a variety of reasons including the impacts the installation would have on ground and surface water supplies and quality (SouthWest Organizing Project, 1995). This is an important example of urban-based struggles related to sustainable management of watersheds.

Legal theorists have made significant contributions to research on environmental justice (see Rechtschaffen and Gauna, 2002). For example, Eileen Gauna (1995, 1998) critically deconstructs the legal regimes of environmental protection to reveal limits and contradictions facing the EJM in struggles to redefine basic standards in the interface between disproportionate adverse impacts, the mitigation of environmental risks, and civil rights law.[10] Despite its successes, the EJM is still a 'legal misfit' in the contemporary context of a location at the theoretically undeveloped intersections of environmental and civil rights law. Legal and scientific-technical rationalities inhibit the development of more effective modes of citizen participation, despite capstone achievements like the NEJAC. Inclusion does not guarantee effectiveness of participation (Gauna, 1998: 63–64).

Gauna explores a range of solutions to the limits of effective citizen participation. These include the training of activists in affected communities to detect corporate or governmental agency non-compliance with federal environmental protection laws and regulations; 'equity lodestar adjustments' to allow communities of color more equitable access to legal and scientific consultants; and consideration of extant inequities in the setting of penalties for polluters. The EPA could deny pollution credits to corporations that rely on market-based (as opposed to regulatory) frameworks to implement environmental mitigation measures or pollution abatement technologies, if the firm is involved in inequitable practices that target low-income areas or communities of color (Gauna, 1995: 79–87).

Gerald Torres (1994, 1996) has also made some notable contributions that synthesize legal scholarship with critical race theory. Torres (1996) offers an analysis of the major criticisms directed at the concept of environmental racism, which he categorizes into moral, market-based, and empirical varieties. The market-based critiques hold that poor people 'merely choose, and rationally so, to spend their scarce resources on…goods' rather than on environmental protection or quality of life.

10 An example of this is the adoption by the EJM of a Title VI legal strategy that was supported and encouraged by numerous legal theorists; for example, see Fisher (1995), Colopy (1994), and Cole (1994); also, see Rechtschaffen and Gauna (2002). Unfortunately, recent Supreme Court decisions imposed new barriers between the EJM and its goal of a fundamental restructuring of environmental and civil rights laws and policies. In the spring of 2001, in Alexander v. Sandoval, the Supreme Court ruled against a Mexican immigrant woman who, under Title VI of the 1964 Civil Rights Act, had challenged the State of

In a brilliant rebuttal of these criticisms, Torres notes how this approach overlooks 'the extent to which market forces themselves have produced the results we see,' that is, the patterns of disproportionate siting of environmental risks and harms in low-income communities of color (Torres, 1996: 607).

Some researchers have focused on the role of women activists in the Latino/a EJM (for e.g., Pardo, 1990, 1998; Córdova, 1997; Davis, 1998; Kirk, 1998). Mary Pardo (1990, 1998) produced one of the earliest studies of women in the EJM that focused on the MELA, a grassroots organization that resisted the siting of hazardous sites and locally unwanted industries in their communities. Pardo's research found that women activists in MELA emphasized their identities as mothers and members of an ethnic and national origin community. In part, the adoption of the identity politics of motherhood was strategic, that is, it was intended to provide the activists with legitimation as political actors (Pardo, 1998: 248–252).

Teresa Córdova found that Chicana activists working through the SWOP and the Southwest Network display sophisticated knowledge of socioeconomic conditions and are 'aware of trends in the world economy and the impact of those trends on their region.' Moreover, Chicanas display a high level of 'oppositional consciousness,' embrace values supportive of 'collective good,' and are highly critical of authorities of domination (Córdova, 1997: 48). Importantly, Chicana activists utilize organizations that are not gender based to affect issues facing their communities. 'These organizations become vehicles to address the negative impacts on women of occupational and land-use policies' (Córdova, 1997: 49). Significantly, this research demonstrates the importance of 'localized identities' as the basis for participation in multiracial EJ coalitions and networks.

Malia Davis (1998) explores the intersections of race, class, and gender in Chicano/a environmental justice struggles to assess the relevance of ecofeminism as a movement ideology. Davis found that Chicana activists tend to perceive feminism and environmentalism 'mainly as white middle-class movements that are generally exclusive of the needs of people of color and the poor' (1998: 227). She found that Chicana EJ activists 'connect environmental and social justice activism to class and race issues' and '[d]espite the overt sexism and racism encountered [in their communities], they see their oppression as based fundamentally in an unequal distribution of wealth and therefore inequitable access to resources and power' (Davis, 1998: 227).

In a similar vein, Gwyn Kirk (1998) explores the relationship between ecofeminism and Chicano/a environmentalism and finds considerable common ground. Ecofeminists and Chicano/a environmental activists

Alabama's failure to provide a driving test in Spanish. The decision all but ends the ability of individuals or NGOs to launch EJ lawsuits under Title VI. Before Alexander v. Sandoval, EJ activists and research scholars were consistently and effectively relying on Title VI as a legal instrument to launch a wide range of litigation struggles focused on addressing patterns of disproportionate adverse impacts and intentional discrimination in federal (and federally funded) programs.

share a concern for an understanding of the economic roots of environmental degradation; capitalism is the fundamental problem (Kirk, 1998: 188). In similar fashion, ecofeminists and Chicano/a eco-activists also address the 'inter-locking structures of domination' and they reinforce connections between people and nature (1998: 188–189). Moreover, Kirk found that ecofeminists and Chicano/a eco-activists both challenge institutionalized, patriarchal forms of science and its tendency to privilege expert knowledge; both value the importance of 'home-collected information concerning toxins,' information that in both cases is typically collected by women (Kirk, 1998: 191). Finally, ecofeminists and Chicano/a eco-activists share a 'politics of reconstruction' and emphasize the development of alternative models to the dominant cultural and economic systems.

Political ecology of sustainable development

Political ecology is the study of power relations in the construction of environmental problems and policies (Peet and Watts, 1996; Bryant and Bailey, 1997). Debates over sustainable development, over-population, the tragedy of the commons, and the causes and environmental effects of poverty are relevant to Latino/a communities. In the EJM, there has been a shift in the past five years or so from a focus on the critique of environmental racism to the elaboration of a discourse on sustainable development. While Pulido, Peña, and Perfecto made contributions to the discourse on sustainability in the early and mid 1990s, the concept has only more recently gained wider currency in the EJM. For example, the 1995 annual gathering of the SNEEJ focused on the theme of sustainable development and environmental justice. The Second EJ Summit (October, 2002) will integrate the themes of sustainable development and globalization. With a couple of exceptions, very little work has been published by Latino/a scholars on the concept of sustainable development and its relevance to the EJM (Peña, 1992, 1997; Pulido, 1993, 1996a, b, 1998, 2000; Torres, 1996).

Debates on the population crisis are relevant. Some environmentalists have repeatedly used neo-Malthusian arguments to oppose immigration from Mexico and Latin America. This sparked a fierce controversy in the early 1990s when the iconoclastic radical environmentalists, Edward Abbey and Dave Foreman, pronounced that Mexican immigrants were an inferior race of people who would overrun the wilderness and damage the American environment (see Peña, 2004). This was an ironic development since Latino/a environmental historians had shown that over the course of the late 19th and 20th centuries, numerous rural communities had actually lost large portions of their Mexican-origin residents; over-population in the rural Intermountain West was caused by

the in-migration of large numbers of Anglo newcomers (Peña and Martínez, 1998). The Sierra Club also had an internal struggle related to proposals by some of its members for a strong policy position against immigration as a strategy to curb population growth in the United States. In 1998, the membership of the Sierra Club voted by a 61% majority against a policy statement calling for a virtual end to immigration to the US (Pope, 1998). Latino/a criticism played an important role in persuading the membership of the Sierra Club to vote against the anti-immigration policy.

The debate over the tragedy of the commons is also important to Latino/a ecological studies.[11] The loss of communal lands in Mexican American land grant communities remains a major issue in the EJM (Figueroa 2001). Many environmentalists remain opposed to restoration of land grants because they have bought into the myth of the degraded commons (Peña and Martínez, 1998). The issue of common space is equally important to urban communities, as illustrated by struggles for public-use areas and neighborhood parks. These struggles have often come from communities damaged or displaced by the construction of freeways and other urban infrastructure (Peña, 2004).

11 The theory of the tragedy of the commons was proposed by Hardin (1968) who argued that commonly held resources would be abused. The basic argument is that property belonging to no one will be abused by all. Thus, Hardin argued for privatization of common property resources. For critiques, see Goldman (1993) and The Ecologist (1993).

The worldwide campaign against commercial agricultural biotechnology, the release of genetically engineered organisms (GEOs) into the environment, and the imposition of the patenting regime is a significant development (Ho, 1998; Teitel and Wilson, 1999). The relevance of this to farm workers and farmers of color cannot be overemphasized. One area of agricultural biotech focuses on the production of GEOs that have been engineered for increased resistance to herbicides and pesticides. These plants are genetically altered to survive higher chemical-treatment protocols. The implications are obvious: farm workers will bear a disproportionate burden of higher-level toxic exposures in the fields. There is a profound need for broader and more inclusive research on the health risks posed for farm workers by the use of transgenic crops and their chemical-treatment protocols.

The problem of GEOs is relevant to Latino/a farmers. Commercialization of agricultural biotechnology depends on the patenting regime. The issue is that many GEOs are based on genetic materials that have often been unethically collected or extracted from land race crops developed and preserved by indigenous, peasant, and traditional farmers. Latino/a farmers are an important part of this global community of seed-savers who preserve the world's agroecological and crop biodiversity. Their interests and traditions of seed saving are threatened by GEOs and the patenting regime. One recent case of patent infringement on cultivators of traditional land race varieties is the patent for the 'Enola Bean,' a Mexican land race of the scarlet runner bean that has been grown for

centuries by Indian, Mexican, and Mexican American farmers. The case involves a demand by the patent holder that the traditional growers not be allowed to export their land race varieties to the United States. Additional threats are posed by a phenomenon known as horizontal gene transfer (HGT, a process in which organisms exchange genetic information across the boundaries of species and phyla). In this context, HGT could result in the 'genetic contamination' of traditional land race varieties or produce super weeds that cannot be controlled by the natural and organic practices preferred by many traditional Latino/a farmers.[12]

12 On the Enola bean case, see Peña (2001a, b, c).

In the area of human genetics, Latino/a researchers will find a similar set of concerns. For example, scientists associated with the National Institute of Mental Health (NIMH) called for a 'Violence Initiative.' This project seeks to establish and test a system to genetically screen inner-city African and Latino/a American youth to determine their 'genetic predispositions to violence,' and offer the appropriate 'therapeutic interventions.' Mae-Wan Ho, a distinguished molecular biologist, warns that the Violence Initiative would target 100,000 inner-city youth of color in the US for genetic screening to identify the 'biochemical and genetic defects…[that] make them prone to violent crimes later in life' (Ho, 1998; Breggin, 1995–1996).[13] This represents an example of the threats posed by the rise of the 'new eugenics.' Latino/a scholars should respond to the rise of biotechnology and initiate critical discourses to demystify and challenge the myths of geneticization, which have led to misplaced public health spending priorities that marginalize non-genetic areas of biomedical research (i.e., research on the environmental and socio-economic correlates of health and illness).

13 The initial proposal for the so-called Violence Initiative was made in 1992 by Dr Frederick Goodwin, at the time Head of the National Institute of Mental Health (NIMH).

Some scholars have addressed the issue of positionality to explain the limits of conventional theories of framing in the environmental justice discourse (Pulido, 1996b; Pulido and Peña, 1998). The concept of framing has been used among social scientists who opt for social movement theoretical approaches to the study of the EJM. Framing refers to the discursive and ideological practices used by individuals, groups, and social movements to 'identify, interpret, and express social and political grievances.' Framing is also viewed as 'a scheme of interpretations that guides the way in which ideological meanings and beliefs are packaged by movement activists' (Taylor, 2000: 511).

Pulido and Peña (1998) caution against relying on the framing theory, especially in the absence of serious analysis of historical, cultural, and political economic factors that impinge on discourse and identity formation. Framing theory has been used to argue that Latino/as and other people of color differ from whites in how they identify, define, and interpret environmental problems (e.g., Capek, 1993). The idea is that the first group (Latino/a) is primarily concerned with issues like lead

abatement and toxic wastes, while the latter group (white) is concerned with endangered species and wilderness protection. The example of pesticides illustrates the limits of the framing theory. As an organizing and public policy issue, pesticides were in the 1960s (and are still today) equally important to white environmentalists and Latino/a farm workers. While white environmentalists and Mexican American farm workers are equally concerned with pesticides as an environmental issue, they differ markedly in their political and strategic approaches (Pulido and Peña, 1998).

These differences derive from the positionality of each group: 'Positionality refers to a person's location within the larger social formation including one's class position, gender and sexuality, and racial identity within a particular social formation' (Pulido and Peña, 1998: 34). Furthermore: 'Activists of all sorts may be involved in the same environmental issue… but mainstream and subaltern actors hold different positions in the socioeconomic structure that, in turn, frame their struggles differently' (Pulido and Peña, 1998: 34). In this case, environmentalists framed the pesticides issue from their positionality as middle-class and urban residents who have an appreciation for birds and other wildlife; the idea that pesticides is an issue affecting farm worker health and safety eluded their positionality. In contrast, farm workers framed the issue of pesticides from their positionality as working-class people directly exposed to the health hazards and risks of pesticides at the point of production. Environmentalists sought to protect birds from pesticides; farm workers sought to eliminate pesticides at the point of production while working to gain a collective bargaining contract that would empower them to take control of the pesticides problem as a matter of workers' rights.

As noted earlier, some Latino/a research scholars have criticized the overemphasis placed by the EJM and scholarly literature on the politics of toxicity and, by extension, on the politics of disproportionate adverse impacts. While environmental racism often involves disparate impacts from and exposure to toxic and hazardous wastes, the deterioration of home, work, and neighborhood environments includes a broader range of economic and political threats to ecological and community integrity (Peña as quoted in Adamson and Stein, 2000: 165–165; also see Peña, 1991, 2002, 2003a). Some researchers focus on gentrification, tourism, second home and resort development, deforestation, and the loss of communal lands and water rights as principal factors in the ravaging of many communities of color (Rodriguez, 1987, 1994; Peña, 1991, 1992, 1998, 2002, 2003a). For many Native and Mexican Americans, the legacies of colonialism and conquest, including ideologies of racial domination that ascribe inferiority to the colonized and the loss of

homelands through private enclosure and government expropriations, are more prominent problems in elaborating environmental racism in the rural southwest context (Peña, 1998).

Others express concern about insufficient attention given the intersections of race with class, gender, and other differences in ecological politics. This is especially the case if we move from the critique of environmental racism to the study of the EJM itself – the history and politics of its discourses on nature, ideologies and identities, mobilizing of resources, organizing strategies, and organizational forms (for e.g., see Pulido, 1996a, b; Taylor, 1997; Peña, 2003a). Pulido (1996a, b: 146) argues that '[d]espite scholar's recent emphasis on the fragmentary nature of identity, few have documented the process of identity formation among successful broad-based contemporary social movements.' Radical critics have tended to disparage politics based on identity because they view it as the source of the political fragmentation of the left in the period since the 1960s (Cohen, 1985; Ross, 1988; Handler, 1992; for a critique see Pulido, 1996a, b). However, Pulido's research demonstrates how the EJM used the 'unitary' identity of 'people of color' to build one of the most successful, broad-based social movements in recent American history.

In another vein, Peña (2003a) demonstrates the dangers and pitfalls of identity politics in the EJM. His study of the struggle to restore the historic common lands enclosed by the Taylor Ranch illustrates how cultural nationalist identities undermined the ability for the local community to mobilize resources for the purchase of the land grant. Place-based identities, he argues, are not inherently progressive. These may in fact prove detrimental to EJ struggles if adherents adopt inflexible and essential identity constructs that constrain strategic options in a local social movement and may disrupt the process of resource mobilization.

Finally, another important set of contributions that is relevant to the emerging discourse on sustainable development and social justice involves research in place-based ecological knowledge. Respect for place-based ecological knowledge is one of the PEJ. The ethic of grassroots local knowledge challenges the top-down, expert-driven ethics of environmental risk assessment. It also values local knowledge as the basis of sustainable alternatives to global capitalism.

Ethnoecology, the study of place-based ecological knowledge, is largely the domain of environmental anthropologists (Nazarea, 1999). This field has roots in the work of cultural ecologists and cognitive anthropologists who have studied local knowledge of places. The fields of ethnobiology, ethnobotany, ethnoecology, and ethnoentomology are among the research specialties that have contributed much to the documenting of the diversity and adaptability of such knowledge (Peña, 1998, 1999; Peña and Martínez, 1998). Latino/a contributions to the ethnoecology have

emerged only over the past decade. Some important recent contributions to include research on the relation between acequia cultural landscapes and biodiversity (Peña, 1999, 2003b), the ethnobotany of the acequia (Salmon, 2000), the ethnomedical knowledge of traditional folk healers (Rubine in Peña and Martínez, 2000), traditional land- and water-use practices (Peña, 1998, 1999; Peña and Martínez, 1998; Rivera, 1998), and regenerative agroecology (Peña, 1999, 2003b). Research by ethnoecologists is relevant to the EJ struggles of land-based communities. The documentation of local knowledge and mapping of traditional-use areas legitimizes the land-use claims of local communities and promotes models for participatory ecosystem management (Peña, 2001b, 2003b). Researchers have recovered land- and water-use management traditions and documented the sustainable and democratic principles that guide organizations like the acequia and land grant associations.

Agroecological research on Latino/a farmers is an important contribution to the sustainable agriculture discourse and highlights struggles for participatory models of ecological management and the prospects for sustainable and equitable agriculture (Peña, 1999). Ethnoecology also provides an alternative scientific basis for the legitimation of TEK. This legitimation is important in the legal context of litigation over damages to watersheds and the property rights of local land-based communities. The ethnoscientific re-qualification of place-based knowledge is also important in strengthening communities to successfully engage the re-adjudication of traditional resource rights to land, water, and other environmental qualities (Nazarea, 1999; Hicks and Peña, 2003).

Place-based cultures must recover their own customs of self-governance of the commons. This ethic embraces decentralism, in which local grassroots movements work from the bottom-up to assert political autonomy from the state and market systems (Esteva and Prakash, 1999). The EJM has always maintained an active, if sometimes ambiguous, relationship with academic research scholars. The changing political nature of this relationship has resulted in a new model of collaborative research that emphasizes respect for the PEJ and local knowledge.[14]

Conclusion: emergent Latino/a ecologies

The emergence of Latino/a ecological discourses involves a wide range of empirical, historical, and theoretical perspectives. However, despite a decade of progress, there are significant gaps in the literature. Further research is needed to expand Latino/a contributions to the sustainable development discourse. Gerald Torres notes that sustainable development is a complex and controversial concept, and emphasizes the need to search for policies to 'ensure economic order does not produce an

14 Robert D. Bullard and Devon G. Peña have collaborated on a set of ethical guidelines for environmental justice research. These were circulated to the Environmental Justice Section of the American Anthropological Association (AAA) at its annual meetings in October 2000.

unstable political order' (1996: 618). Pulido (1996a, b) and Peña (1997, 1998, 2003a) have emphasized the importance of local autonomy in the maintenance of strong traditions of self-governance, place-based ecosystem management, and struggles to restore common property resources as important foundations for sustainable development with social justice.

Critical studies of the Latino/a EJM and the concept of environmental racism are few and far between (e.g., Pulido, 1996a, b, 2000; Peña, 2003a). There is a need for studies that critically examine the limits and contradictions of movement organizational forms, ideologies and identities, strategies, and tactics. There is an equally pressing need for further theoretical exploration of the concept of environmental racism. Pulido has noted the persistence of restrictive, narrow, and commonsensical concepts of racism in the discourse. She criticizes the focus on siting, intentionality, and scale and shows how 'dominant conceptions are problematic because they prevent us from understanding how racism shapes places…[and prevent us from arriving at] a more structural and spatial understanding of racism' (2000: 33). She proposes the concept of 'white privilege' as one way to reconceptualize environmental racism noting how this concept 'allows us to see how environmental racism has been produced – not only by consciously targeting people of color…but by the larger processes of urban development, including white flight, in which whites have sought to fully exploit the benefits of their whiteness' (2000: 33).

The environmental history of Chicano/as is by now fairly well developed, yet research on the 'precursors' of environmental justice is needed. Peña (2004) identifies struggles between the 1870s and 1970s as precursors of the modern-day EJM; these include the El Paso Salt War, Las Gorras Blancas, the Clifton-Morenci and Cananea strikes, the early anti-pesticides campaign of the United Farm Workers Organizing Committee, and the struggle against the Indian Camp Dam as examples that need to be re-examined. Similar ecological histories for other Latino/a communities remain to be developed. We know little about the environmental history of Puerto Rican and other Latino/a communities and yet these clearly have historical experiences involving dramatic ecological changes that merit study.

All these are critical areas for future research scholars to address, but perhaps the most important current gap stems from a lack of systematic studies on the political ecological dimensions of globalization and their effects on Latino/a communities. The critique of globalization from the vantage point of environmental justice has long been an implicit aspect of the discourse on environmental racism (for e.g., see Almeida, 1998; Córdova *et al.*, 2000). However, the theoretical and empirical study of

globalization remains largely wedded to the critique of emerging structures of transnational corporate domination. These are important issues, but alternative perspectives could focus on the direct lived experiences of third-world immigrants, the travelers and restless settlers who have created dynamic new transnational communities complete with their own labor markets, businesses, industries, and community-based institutions. The discourse must address not just domination but, more importantly, resistance and the emergence of alternative forms of global communities and cultures. This is more than 'globalization from below.' It involves a set of phenomena scholars call transnationalism. Portes *et al.* (1999: 219) delimit this concept to 'occupations and activities that require regular and sustained social contacts over time across national borders for their implementation (also see Porks and Zhou, 1992).

We need a political ecology that approaches transnationalism as a process involving multiple locations in the cultures and politics of place making. Transnational place making occurs wherever communities sustain and reproduce themselves through transborder flows of labor, information, materials (including biotic baggage), and social, financial, and other economic assets (Peña, 2001c). An emergent political ecology of place is evident in the urban polyculture *milpas* of the Los Angeles basin where Zapotecas grow heirloom land race varieties of corn, beans, squash, chiles, limes, and avocadoes. These horticultural spaces provide food, herbs, and remedies. The milpas contribute to local food security systems, but also function as autotopographies, that is, as living memory landscapes of the places left behind in Mexico and other points south (González, 1995). To paraphrase Foucault, these quiet but steady transformations are heterotopias in the making. These phenomena are suggestive of a new process of 're-localization' that has not been adequately studied from an empirical or theoretical vantage point (also see Kearney, 1996).

Mike Davis (2000) discusses the Zapotec 'transnational suburbs' in the LA basin, noting how they 'have transplanted traditional village governments *en bloc* to specific inner city Catholic parishes.' They have re-created a system of local self-governance and communal economic organization (Davis, 2000: 85). The transplanting of community self-governance, cooperative economic development, and mutual aid is accompanied by the replanting of maize, chile, and calabasita in urban gardens.

Even the most critical interrogations of concepts of 'locality,' 'culture,' 'place,' and 'community' suggest that globalization is met with fierce resistance and subversion, and much of this derives from the familiar source of identity politics (Gupta and Ferguson, 1999). The sense of place

needs to be re-examined as a significant factor in the formation of resistant Latino/a identities. One scholar notes how 'we need to study structures of feeling that bind space, time, and memory in the production of locations. By this I mean processes by which certain spaces become enshrined as 'homelands,' through which ideas of 'us' and 'them' come to be deeply felt and mapped unto places such as nations. On the other hand, we need to pay attention to those processes that redivide, reterritorialize, and reinscribe space in the global political economy' (Gupta, 1999: 196–197).

The new directions in Latino/a ecological studies might focus on spatial strategies for the anchoring of identities in places, or sites, of cultural production and self-representation. The persistence of identity is imbricated with the capacity for autonomous and generative practices of subaltern networks in civil society. Displacement impinges on the formation of place-based identities and communities and this is a principal consequence of globalization. Displaced communities are re-making their identities through a process that might be characterized as subaltern 'relocalization' and 'reinhabitation' (Peña, 2003a). Latino/a scholars need to avoid a political ecology that myopically proposes globalization and displacement as an inevitable end point to the possibility of localized cultural phenomena like place making. The end of local culture sounds eerily similar to the end of history. Emergent Latino/a political ecologies must make reference to and explore strategies and projects of resistance generated by the submerged networks of displaced and re-localized cultures in an increasingly transnational civil society.

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