

Rethinking Environmental History: World-System History & Global Environmental Change.

Environmental Issues at the U.S.-Mexico Border and the Unequal Territorialization of Value

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JOSIAH HEYMAN

Borders in a World-System Perspective

World-systems thinking draws attention to unequal relationships of exchange across space, and production and consumption involved in such relations. The main focus is on endpoints, such as consumption and waste in the core or degradation in a raw material-producing periphery. In this chapter, I draw attention to places of transformation in between such endpoints where unequal exchange is enacted, often involving immediate, significant steps up or down in value of labor, materials, and energy (Heyman 1994; Kearney 2004). Such transaction and transformation places have sustained significant populations and political and economic power in the historical and archeological record (e.g. mediating the exchange of luxury goods). Today, they can be found in global air and sea ports, as well as land borders between unequal polities. Such places are crucial to the symbolic processes of giving value to people and goods, or redefining their value; and they are thus characterized by intensive value arbitrage, including brokering of goods and services among delineated territories of the world-system, as well as hosting major manufacturing zones that take advantage of spaces with poorly compensated labor to make goods for spaces with higher purchasing power. These locations have two sets of environmental impacts: playing roles in the environmental dynamics of the world-system as a whole, in particular being key sites for the symbolic abstraction and orchestration of material and energy flows identified as crucial in Alf Hornborg's seminal work (2001); and the immediate impact of concentrated people and activities in these key sites.

It is on the latter topic that I focus in this chapter. My case study is the U.S.-Mexico border, home of one of the larger manufacturing complexes in the contemporary world economy (the maquiladoras, final assembly plants in Mexico for exports, mainly to the United States). This region likewise hosts intense commercial transportation and goods brokerage within the framework of the North American Free Trade Agreement (NAFTA). The immense concentration of unequal exchange in this place draws on and impacts regional biophysical systems. At this seam between the territories of two nation-states, a peculiar phenomenon occurs: monetary valuations of people and goods undergo sudden, stepwise changes as they move across the boundary. Wages, prices, state-bureaucratic action, communal action, and socially constructed meanings strongly differ according to their territorial placement within Mexico or the United States, while corporate, small entrepreneurship, and personal or household activities move across these spaces, taking advantage of the proximity of disparities in money, law, and meaning (see Heyman 2004 on value arbitrage through ports of entry on the U.S.-Mexico border). Unequal territorialized and territory crossing processes thus form my starting point in analyzing the various environmental ills of the U.S.-Mexico border region.

The literature on environmental issues at the U.S.-Mexico border is large and sophisticated (see below), and it would be unfair to dismiss its scholarly and public worth. But to characterize my approach, it is useful to develop contrasts with this literature. The latter tends to view the border as a place where two previously separated societies collide, and that many problems stem from that initial difference. As such, it is not particularly attentive to the border as constituted through relationships across space, or the historical dynamics of those relations. Also, the existing literature tends to see the solution of environmental issues in greater connection and cooperation across the border, in keeping with the two colliding nations assumption. But "connection" has long existed and hopeful attempts at cooperation often founder on the ironically polarizing effects of connectedness; we need to pay attention, rather, to what kinds of connections are forged, their qualities of justice and equality, and their social and environmental outcomes.

A historical world-systems approach clarifies hard questions of political economy and ecology that often confound standard analysis by stressing relational processes beneath surface conflicts and disorders (a useful source on how to think in this mode is Hopkins 1982). My approach here is implicitly historical, referring to the dynamics of the late-nineteenth- and twentieth-century capitalist and state development of the border (see Fernandez 1977; Lorey 1999), though for the sake of space I do not narrate the long and

complicated story of the region. Also, for the study of this peculiar and important border the world-systems perspective highlights relationships between apparently opposite "sides"—spaces, classes, cultures, levels of wealth and waste, and so forth. Mexico and the United States are joined in a longstanding unequal relationship that produces, transforms, and reproduces the inequalities and differentiations that are so visible at the border. Thus, we do not have two territories juxtaposed one against the other, but rather a singular process of the territorialization of value into two spaces, "Mexico" and "United States" (on territorialization as a process rather than as a given, see Taylor 1985; Agnew and Corbridge 1995; Paasi 1996). Breaking with the "two nations" perspective helps us understand both polarizing phenomena and ones that cross the territorial boundary, and thus allows for a more complex analysis of economy, culture, politics, and environment on each side.

Environmental Disorders of the U.S.-Mexico Borderlands: A Synopsis

The following summary of the main environmental issues facing the border region is based on Ingram, Laney, and Gillilan (1995), Liverman et al. (1999), and Herzog (2000).

Water Supply

Irrigated farms and large binational urban areas make unsustainable demands on water supplies, including rivers that are overallocated to the point that they cannot sustain riverine habitats downstream, and underground aquifers that are drawn down faster than their recharge rates. At the same time, water is maldistributed, with many households lacking faucet service and receiving only distant hand-carried or truck-delivered supplies that are expensive in price and labor time/effort. Lack of access to piped water is more widespread in Mexican border settlements but occurs in the United States also.

Sewage

Many households lack adequate means to dispose of sewage, again more often in Mexico than the United States but occurring in both nations. Centralized sewage lines do not extend to many settlement areas, while the alternatives, pit latrines and septic systems, are often inadequate or faulty. This is due not just to lack of information, but also limited household and public resources for better systems. Even centralized sewage systems

are often inadequate; many but not all U.S. cities use secondary treatment, but most Mexican cities provide only primary treatment, and their systems periodically fail.

Toxic Chemical Wastes

Industrial toxic wastes are sometimes improperly disposed of or spilled accidentally by maquiladoras, and there are also extensive industrial wastes from the metal smelting/refining industry. Such chemicals (1) affect workers directly; (2) dissipate into the air, forming a smog component in some cases; (3) are disposed of in sewer systems, persistently contaminating treated water outputs; (4) are disposed of on the ground, seeping into groundwater aquifers. A related problem is immediately and persistently toxic pesticides from industrial agriculture. There are also nonpoint source consumer chemical runoffs from settlement areas.

Air Quality

Several border metropolitan areas, notably Las Cruces–El Paso–Ciudad Juárez, form air pollution catchment areas subject to smog inversions. Contributors include internal combustion engines, exacerbated by lines of traffic waiting to be inspected to cross the border, and industrial processes giving off volatile organic compounds, heavy metals, crushed rock powder, and so forth. To diesel particulates are added particulates from dirt streets, most common in Mexico but not unknown in the United States, and soot from low-quality combustion processes such as household fires and small-scale brickyards in Mexico. A recent study by the North American Commission for Environmental Cooperation shows significant excess mortality and morbidity among children younger than five in Ciudad Juárez, Mexico, due to increased truck traffic from growing cross-boundary commerce under the North American Free Trade Agreement (Romieu et al. 2003). Recently, maquiladora-style electricity plants have lined Baja California's northern border, supplying power to California (U.S.), and taking advantage of stepwise differentials in labor and fuel cost, environmental regulation, and regulations on plant siting (Ross 2003).

Habitat/Species Decline and Change

Loss of habitat and decline of some plant and animal species has occurred through direct land disturbance (Bahre 1991) and stream channelization (e.g. urban and agricultural clearing of river bottom land), as well as the water draw down (both surface and subsurface) highlighted above.

The five environmental disorders just listed occur within three main contexts. First, key segments of the border are now heavily urbanized, including several multimillion-person megalopolises. The question, then, is what drives urbanization in border regions? Second, border crossings concentrate huge transportation systems for persons and goods, with bottlenecks at inspection points. Again, we beg a question: what in border settings promotes dense webs of transactions and the movement to enact them? Finally, there are vast productive complexes, both industrial and agricultural, which besides their own outputs are contributors to the urbanization and transaction/transportation phenomena listed above. Not surprisingly, we ask why they disproportionately cluster along the border.

Before we proceed further, it is worth noting that much of the border region is arid to semiarid, but this is not the unique cause of its environmental problems. First, a vastly larger region, most of northern Mexico and the U.S. west, is arid and semiarid, so a general environmental characterization cannot fully explain the border's specifics. Second, water shortage is relative to human demand, so this begs the question why population and industry concentrate in a region with few propitious sites. Thus, in framing our examination, we can reject "natural features of the region" as a privileged starting point, although we must remain attentive to the causal force of biophysical processes in interaction with human activities.

Processes Underlying Environmental Disorders

These environmental issues occur away from the border in both nations, and often in just as bad or worse states. Their causes—water demand in arid regions, traffic, industrial pollution, and so forth—are by no means unique, then, and we should bear in mind that all such cases partake of the same broad causes (e.g. capitalist, large-scale urbanization in regions able to supply water only for short time horizons and in unsustainable ways). I am thus not claiming that the border is uniquely an environmental hellhole, which much superficial writing about the region implies. Rather, I start with widely shared social processes engendering environmental disequilibria, and seek to understand how they emerged at the border in a severe way.

Let us begin with major border labor users, maquiladoras and mechanized irrigation agriculture. Maquiladoras concentrate along the Mexican side of the border, although they have diffused to the Mexican interior and Central America. These factories bring parts and subassemblies from worldwide suppliers, finish and assemble them in a low-wage locale (e.g. border Mexico), and reexport them to places (e.g. the United States) where

the selling price and volume is comparatively high, based on much higher incomes. A rule of thumb on the border is that a working-class Mexican American makes in one hour what she or he can make in one day across the boundary in Mexico. In other words, maquiladoras realize value through cross-bordering the territorialized difference in wage levels, going from moderate wage-value parts to low-value final assembly to high-value selling price, realizing the step up from parts to whole. The border also allows U.S. managers and engineers to live in the United States, where they are more culturally and socially comfortable, while still directly accessing the poor standards of living (and thus low wages) of Mexican border residents.

A similar case can be made for the location on the U.S. side of the border of irrigated agriculture and nonferrous metal smelting and refining. The location of these production processes is mainly determined by forces other than the price of labor: for agriculture, alluvial soils in desert river valleys, and access to engineered water supplies; for smelters and refineries, central location in a network of mines and mills, since ore is heavy and costly to transport, centralization that allows constant and high-volume supply for capital-intensive plants. Smelters and refineries also have high demands for surface or groundwater for cooling and electrolytic baths. However, the agricultural districts and smelters/refineries in the United States near the border have an incremental advantage over other sites: access to relatively less expensive Mexican workers, both as migrants (often farmworkers) and as U.S.-resident workers in places with saturated and depressed labor markets. (Such labor-based locational effects do not account for border Mexican smelting and irrigated agriculture, since Mexico's highest pay rates actually occur near the United States, but proximity to U.S. markets and infrastructure does affect location.)

We will explore below the environmental effects of concentration of poorly paid employees. Let us focus here on direct pollution from these production processes. Weak territorialization of collective action in Mexico (both public participation and state-bureaucratic regulation) gives locational advantage to producers shifting dirty processes south across the border rather than expending capital on cleaner processes or shutting down such production altogether. Propaganda critical of the maquiladoras and free trade has seized on this "exporting of pollution" and the lack of enforcement of environmental laws in Mexico to make it seem a massive and uniform feature of border industry. Fortunately, Donovan Corliss (2000) provides a finer-grained empirical study. He found a number of Tijuana maquiladoras that moved from the United States to Mexico partly to avoid environmental regulation and the public "right to know" about toxic releases. For example,

furniture plants moved from Los Angeles to Tijuana to avoid restrictions on their use of volatile organic finishes, which contribute significantly to urban smog; likewise, the so-called battery recycling industry (more like battery junkyards/metal smelters) moved to Mexico, where there is little control over their handling of lead and cadmium. On the other hand, many maquiladoras use standard production processes whether in the United States or Mexico. In these cases, presumably located at the border because of wage costs rather than pollution exporting, any additional toxic increment over industry best practices was caused by the company and the plant manager. There was little pressure in Mexico to be careful and up-to-date, so that only specific, conscientious individuals and corporations ran relatively "clean" plants. Part of this, in turn, was rooted in personal attitudes but part in consumer/activist environmental pressure (weaker in Mexico than the United States, for reasons that we will see later).

Now, let us turn from production complexes to urbanization, involving the environmental effects of households, and in particular, the border as a setting for territorial-crossing consumption. There is, first, a highly unequal social wage between the Mexican and the U.S. territory. By social wage, I mean not only the prevailing wages paid directly by employers, but also the resident's claim on the collective, redistributed social surplus, through public health infrastructure, schools, medical services, retirement, and so forth. Both societies are unequal, however, and there are prosperous as well as poor (in purchasing power and claim on collective distributions) households in both nations. Second, in complexly patterned ways, the territory of Mexico and the United States mean different things to different audiences. Among other things, Mexico to U.S. residents tends to mean both poverty and leisure (pleasure and release), and a certain kind of exotic, tropical otherness. The United States to Mexican residents means power, honesty, and efficiency, as well as attractive wealth and modernity, but also a corrosive, immoral, and antifamilial, permissive individualism (no one source addresses the full terrain of meanings, but Vila 2000 provides a start). In both analyses, social wage and differential meanings, the point is not just that the two terrains are divided but that individuals and households actively maneuver through them, seeking particular sets of resources and meanings and causing peculiar dynamics in border urbanism.

For example, U.S.-side border cities attract residents in two ways. On one hand, prosperous residents with secure jobs and social wage claims obtain a yet higher standard of living because they can obtain goods, labor services, and meanings from the low-value Mexican side of the border. El Paso, for example, is noted for cheap domestic services and small-scale construction

labor. There is also a large commercial sex industry in Mexican border cities, a profusion of bars and restaurants near some ports of entry (and, more quietly, dealers in cocaine, heroin, and marijuana), pharmacies selling medications/drugs inexpensively and without prescription, and innumerable shops selling mass-produced "crafts" and "art" from Mexico. This in turn supports Mexican-side urbanization, from maids to barkeeps to street vendors.

On the other hand, U.S. border cities also attract a steady flow of immigration, legal and illegal, from Mexico. This is in spite of U.S.-side border cities having chronically saturated labor markets and high unemployment. However, the U.S. side offers households moving from Mexico a much higher typical wage when there is work, and a better, if still quite poor, social wage, whether in the form of police protection, schools, or access to the county hospital emergency room. The irony is that people leave the most prosperous and economically active region of lower-value Mexico for the most depressed region of the higher-value United States; they go from being well employed but miserably paid to being underemployed and somewhat less miserably paid.

Mexican border cities also are shaped by these cross-border transactions. I have already mentioned U.S. household and small business employment of Mexican laborers and purchases of cheap Mexican goods and services, which combine with maquiladoras to bring about steady migratory increase (and retention of natural growth increase) in urban population. There is a smuggling economy, whose impact is discussed below. There are, typical of any border, commercial/customs brokerage and binational business facilitation sectors (bankers, lawyers, accountants, etc.). There is the transportation infrastructure of the border crossing. Finally, there is the value-transacting role of the U.S. border city in the household economy and social status moves of Mexican-side residents, which merits a bit of elaboration.

U.S. border cities have disproportionately large commercial sectors, including both retailers of cheap goods and expensive malls, boutiques, auto dealerships, and so on. Laredo, Texas, for example, has the highest department store square footage per person of any city in the United States, despite a low-wage local economy, because it attracts a high volume of shoppers from Nuevo Laredo, Coahuila, and in the nearby interior, the huge Mexican city of Monterrey. Not only does this create many low-wage, no-benefits store jobs in the United States, but it also adds to the meaning-value of "proximity to the United States" for Mexicans in border cities. Not only are many goods in the United States better in quality or price because of limitations

in Mexico's business structure and domestic production, but also the United States conveys an increment in status in the view of some Mexicans. In turn, constant transacting of jobs, services, goods, and meanings back and forth across the border favors the extreme urbanization of this region.

To demonstrate how border urbanization shapes environmental issues, let us look at *colonias* (in Mexico, *colonias populares*), informally developed residential areas with cheap lots, lacking preprovided infrastructure (water supply, sewage, piped gas, electricity, paved streets, police and fire protection, schools, clinics, etc.), and having self-constructed houses. As Peter Ward (1999) argues, informal settlements in both nations result from rapid expansion of regional employment combined with underfunding of public infrastructure, planning, and housing. For the United States, he identifies flawed private markets in housing and land that do not provide standard subdivisions and mortgages to low-income homebuyers, relegating them to self-built housing on plots provided by land speculators. In Mexico, *colonias populares* lack basic services like water, paved streets, and sewage, thereby impacting the local environment, because of the extreme inequalities in that nation's development, in which (1) market mechanisms, like home mortgages and subdivisions, while present, are underdeveloped because of the limited size of and economic fragility of the middle class and upper working class, and (2) collective redistribution is extremely limited because the middle and upper classes pay few taxes and support few services, opting instead for private household solutions (water storage tanks on roofs, for example, rather than adequate water mains with sufficient pressure and cleanliness; see Ingram, Laney, and Gillilan 1995). However, *colonias populares* are by no means unique to the border, and some of their environmental impacts (e.g., particulates from unpaved streets), derive from a general pattern of rapid urbanization, in which basic infrastructure cannot keep up with demand. In all these issues, unequal territorialization of value is a cause, several steps removed.

In the case of U.S. *colonias*, however, household response to unequal territorialization of value is quite direct. *Colonias* attract a wide variety of settlers, some of them migrants from Mexico, others internal migrants within the United States (from inner city barrio rentals to city fringe homeownership, for example). However, whether directly immigrant or not, *colonia* dwellers use a distinctly Mexican self-provisioning household strategy for creating decent housing in the United States, given lack of market power to enter subdivisions and use mortgage lenders. They are occupied largely by people whose value (in the eyes of the larger society, monetarily and meaningfully) is still that of Mexico, that is, extremely low in U.S. terms: farm

laborers, casual construction workers, domestics, small repairmen, truck drivers, and so on. Yet they are making a territorial move into or inside the United States, on the basis of the much greater value to be had even for poor people inside this nation—a logic of border crossing explained above. They are people with little power in either of the grand territories of value, acting on the needs and logics that have always made sense to the powerless, that of opportunistic household provisioning. (By “opportunistic,” I am highlighting the literal meaning of seizing opportunities; I am not asserting that they think on a short time line, which would be incorrect in many cases of *colonias* residents who build homes for themselves and their children over long time horizons.) Even if we cast aside the common U.S. stereotypes of “dirty” *colonias* (who in fact probably produce less waste except untreated sewage than prosperous urban households), it is important to link the environmental problems that do plague *colonias* residents, including public health problems and disproportionately high expenses for basic services like water, with the overall pattern of combined and uneven development on the border.

Finally, state and counter-state activities concentrate along borders. Laws, regulations, police, the military, and other enforcement and service agencies are obvious forms of territorialization. Joseph Nevins (2002) and I (Heyman 1998, 1999) have argued that cross-border trade and so-called globalization are accompanied not by weakening of the territorial U.S. state, but its strengthening, both ideologically and practically. The reasons are complex, but relate significantly to the territorialization of value and meaning. For example, U.S. immigration policy (legal admittance of permanent and temporary labor migrants) and U.S. immigration law enforcement (keeping migrants out incompletely) allows some seepage of low-value Mexican workers into the high-value and demand U.S. labor market, while generally maintaining the separation of low- and high-wage territories that might collapse if there were a truly open border with free movement of labor. Elsewhere, I have rejected omniscient, capitalist-functional models of border law enforcement (e.g. a valve that permits precisely the correct flow of labor into the U.S.) because this lacks a role for ideology and politics in shaping border policy (see Heyman 1998). But even within a more sophisticated economic-political-ideological model, the U.S. state does enforce the territorialization of value.

Leo Chavez (1997) and Tamar Diana Wilson (2000) draw on the provocative, if excessively neat argument of Michael Burawoy (1976) to propose that U.S. immigration law enforcement attempts to keep the reproduction of households in Mexico, where the social wage is quite low, while allowing the direct laborers to enter the United States, where the

wage level is relatively higher and the value of products and services is yet much higher. This does not require an omniscient state, since household reproduction is readily perceived in politics through demands on public hospitals, school systems, bus systems, police services, and so forth. These politics draw on unequal territorial meanings, by which immigrants are welcomed as hard workers but their families are perceived as the embodiment of poverty, dirt, and danger. Further territorializations of meaning include seeing zones outside the nation-state as sources of danger and impurity, and envisioning borders as a crucial place for national security operations. This adds up, as Nevins has insisted, to an increasing territorial concept of the nation-state both in popular consciousness and police-bureaucratic practice.

How does this affect the environment? The indirect effects, in terms of reinforcing territorial value differences in labor and collective redistributions, cannot be neglected. The role of the U.S. state apparatus as symbol and propaganda machine in polarizing meanings between the two countries is also important, and will be addressed in the following section. But here I want to concentrate on the direct environmental effects of concentrated state operations, and also their counterpart in smuggling, the transactions that take advantage of state-enforced differences of value at borders. The U.S.-Mexico border region encloses a huge “cat and mouse” game, with enormous resources deployed on each side. On the U.S. side, a large concentration of well-paid jobs is made up of the military and various police agencies, including the Drug Enforcement Administration (DEA), Federal Bureau of Investigations (FBI), and the various branches of Homeland Security (formerly the Immigration and Naturalization Service and the Customs Bureau). These employees add to the urbanization of the border, of course. Also, the police-military agencies of the state are nearly impervious to environmental scrutiny and restriction (e.g. cutting extensive road systems through slow-recovery arid biomes). After all, so-called national security, a sovereign interest, is involved.

On the other side, state law enforcement provides smugglers a lucrative source of profits in transacting values across unequal terrains. For example, in the early 1990s, U.S. immigration law enforcement changed in such a way that it became much more difficult for undocumented Mexican migrants to cross without the aid of a smuggler. Prices for a trip into the United States rose five- to tenfold (from roughly \$300 to \$1,500–3,000) and the percentage of trips using a smuggler rose sharply. People avoid mentioning it, but drug- and person-smuggling money is a main prop of the border economy. This again contributes to the rapid urbanization of the border, and in remoter areas to trail cutting with widespread littering of the desert.

Environmental Politics at the Border: An Unequal-Relational Perspective

So far, we have examined how the territorialization of values, meanings, and state power creates a dynamic, booming, but also environmentally stressful set of urban centers along the borderline. We now turn to how this territorialization of resources, meanings, and collective action shapes the social construction of "environmental" issues and the various political responses in two nations. Pablo Vila and John Peterson (2003) document, for example, how U.S.-side residents focus on poverty, lax regulation, and backwardness as a cause of Mexican pollution, and Mexican-side residents focus on the unfairness of the United States coming to make money in their country but leaving behind social and environmental damage. O. Alberto Pombo (2000), addressing water and sewage, notes that the priorities of poor Tijuana residents (piped water) deviate considerably from the expert goals (high quality toilets/sewage mains). And Ingram, Laney, and Gillilan (1995), though not taking an explicit social-construction perspective, describe a series of cross-border misunderstandings and tensions over water and sewage.

I accept the idea of social construction of environmental issues, rather than the naïve and mechanical assumption of direct rational response to objective reality. The question is whether underlying processes at borders characteristically shape such constructions. One candidate is the interplay between territorialized state capacity and individual/household and corporate perceptions of possible action. More concretely, the two governments at the border have vastly different abilities to put in place public, environmental infrastructure. They also have differing abilities to regulate corporate polluters, but both nations are weak in that regard. In the United States, clean water supplies and decent-quality, secondary sewage treatment are the norm, because of well-capitalized public utilities. Most householders take for granted such services, paying regularly for utilities, and do not see their existence as a matter of making priorities and choices. When such services are not delivered, as in the case of U.S.-side *colonias*, this shows the limits of U.S. state capacity vis-à-vis a very marginalized population and the informal real estate market that serves it.

Meanwhile, on the Mexican side, a less adequately funded state (exacerbated by Mexico's centralized budget system that starves state and local governments of funds) means two things. First, many solutions take place at the household level, and are highly unequal. Rich families, for example, invest in high-capacity clean water storage systems to cope with sporadic water supply. Since solutions are immediate and personal, rather than

infrastructural and collective, this detracts from systematic management of problems. Second, the decision to use scarce government resources in one or another infrastructure is always political, being incomplete both geographically (e.g. coverage of a middle-class neighborhood but not a poor one) and by type of service (e.g. piped water before sewer mains). How households and broader social groups arrange infrastructure affects not only the physical systems but also the social meanings of "clean environment" in each nation and among the classes within them.

In turn, differential ways of addressing infrastructure must be viewed in terms of long-term processes of unequal exchange. It is hardly a surprise that the fiscal capacities of Mexican border municipalities and most utility ratepayers in them is lower than in the United States. This makes it more difficult to organize nonpoliticized, expert-managed, routine collective handling of waste (human and industrial) in Mexico. Yet it is not the case that population and industry is much smaller on the Mexican side than the U.S. side, in apparent correspondence with the lower resources (though it is somewhat consistent with lower consumption and waste per person); rather, in this case of unequal exchange-driven development, there are more people and industry on the poorer side than on the richer side. Hence the clashing social constructions of Mexican and U.S. residents are both correct; Mexico does not routinely handle its waste as well as the United States, which often harms Mexicans but sometimes spills over to the U.S. side, while simultaneously the United States does profit from Mexico and is indirectly responsible for many of the environmental problems in this region.

Now, as Vila points out, the social construction of environmental issues on the border often leads to polarization. Let us take a shared environmental problem, such as raw or primary-treated sewage releases from Mexico flowing into the United States (see Ingram, Laney, and Gillilan 1995). This is a genuine problem, which gives rise to a lot of arrogant hue and cry among Americans who take sewage treatment for granted, and who also tend to hold stereotypes that all problems of dirt and poverty come from Mexico. In turn, Mexicans, overwhelmed by needs that surpass their collective fiscal capacities, feel bullied by the United States into taking action on the sewage problem, which may not be the first demand of most households (Pombo 2000) although objectively it harms them. After negotiation between the two nations, the United States funds most of the cost of the new infrastructure while a smaller, perhaps symbolic amount is paid by Mexico. U.S. officials and activists perceive budgets that could be used at home going instead to another nation, that is, perceive Mexico as not doing its share or taking its responsibility, while Mexican officials and publics find themselves bullied into

choices they might not otherwise take by a superpower that is profiteering off the region as a whole. The long-term cause of polarization is the unequal distribution of public and household fiscal resources by political territories within one single space of capital accumulation and urban agglomeration.

The characteristic diagnosis of border environmental politics is that boundaries and rigid bureaucratic rules surrounding them get in the way of cross-border popular (or activist) cooperation to address environmental problems (see Ingram, Laney, and Gillilan 1995; Liverman et al. 1999; and Staedt and Coronado 2002). This literature has a certain logic. The border arbitrarily bisects biophysical processes and flows, such as watersheds and aquifers. Optimal solutions demand some form of cooperation or coordination. Likewise, empathetic activists and thoughtful local officials often care deeply about shared health and environmental challenges, and try to work across borders to address them. Indeed, a novel binational agency, the Border Environmental Cooperation Commission, was created under NAFTA to institutionalize such initiatives. Briefly, this organization (with a bilingual and mixed national staff) instigates, advises, and ultimately recommends proposals that ameliorate some environmental problems of border urbanism, such as water supply, water treatment, and solid waste treatment. However, it struggles with unequal funding and different models of political participation and decision-making in the two territories. And it is certainly the case that unimaginative bureaucrats and politicians in each nation, defunding budgets and turf, often frustrate environmental reforms.

But such a view implies that border society on both sides would naturally tend to come to agreement if it were not for the bad guys in distant state and national capitals. Yet this is far from the case. Border societies have their own tendencies toward polarization (Vila 2000, Grimson and Vila 2002). One reason for this is that unequal exchange across differentially valued territorial domains results in visible inequalities and disparities in capacities for and modes of collective action (mostly, state capacity) and in households' and social groups' demands on and strategies within such territories. Hence, cross-border empathy and collective social action will not be sustained by isolated problem-solving programs, but rather an enduring answer lies in an effective struggle for greater collective equality within and between the two separated territories (see Staedt and Coronado 2002).

Conclusion

I began by reciting the various environmental disorders characteristic of the U.S.-Mexico border. In looking for their roots, we found them not in some

singularity of the border environment, but rather in how a random patchwork of largely arid local environments responded to the extreme industrialization, commercial flux, U.S. state activity, and urbanization brought on by the presence of the border itself. To understand this development, we examined how the border as a line between two value terrains favored unequal, stepwise exchange. We noted furthermore that such value inequality interlocks with differential territorialization of meanings and unequal capacity for collective public action. This accounts not only for the rapid development of the border region and for its peculiarities, such as the side with more people and more economic activity (Mexico) having fewer resources for collective problem-solving, but also for the polarizing social construction of environmental issues.

In all of this, we have unconsciously but significantly departed from standard geographic assumptions of public environmentalism. Such perspectives view the problems of the rich and poor nations as separate, and indeed they tend to view nations (equated with societies) as separate and coherent units laid over a preexisting "natural" terrain. Border problems in such a view are ones of incomplete connection and cooperation, and failed or "bad" development. However, public action using such a frame will almost certainly encounter surprising frustrations and paradoxes, and will tend to bypass important causes. The world-system perspective draws our attention to the processes that combine human and biophysical action in making and remaking spaces, in this case, bounded territories. Likewise, it emphasizes the unity of apparently differentiated people and places, and the causes of environmental disequilibrium in "successful" development. This analytical sharpness does not relieve our need to act publicly and collectively, and in practical ways; rather one hopes it will help in such action, through informing tactics and policies, and teaching (broadly meant) about environmental issues.

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