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The Political Ecology of Consumption

Beyond Greed and Guilt

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The Politics of Perspective

Students, scientists, and activists are increasingly concerned about how modern consumption affects the environment.[1] There are good reasons for this concern. Mathis Wackernagel and William E. Rees's (1996) ecological footprint method shows how consumption of final goods (like food), services (like travel), and supplies (like electricity) directly and indirectly use and degrade a significant portion of the earth's resources. Appropriately, concern about consumption is growing among the prosperous people of the world—in both overdeveloped and underdeveloped societies—as they anxiously contemplate their use of energy and materials. Such worries are well expressed in the title and content of Alan Durning's (1992) activist book, *How Much Is Enough?* Two assumptions undergird the thinking of Durning and similar critics. One is that consumption is a matter of desire and volition: I *want* this car. The other is that it is a matter of personal choice: *I* want this car. Over many years of teaching about wealth and poverty, development, material goods, and the environment, I have found that students alternate between greed and guilt about consumption precisely as a result of thinking within those confining assumptions. These assumptions have other effects also: they draw our attention to items about which we make conscious choices, such as clothes or fast food; and they render invisible less individualistic kinds of consumption such as houses, transportation, water, sewage, energy, education, and so on. (See Carrier and Heyman 1997 for a more thorough discussion of these issues.)

The working poor of Agua Prieta, Sonora, Mexico (a small city on the U.S.-Mexico border) offer an illuminating contrast. They are just as concerned with consumption but from an opposite perspective: they worry about not being able to consume enough. Between 1982 and 1986, purchasing power in Mexico fell by nearly one-half due to the nation's massive debt to U.S. banks and the extreme austerity measures imposed so that debt payments could be extracted from the

Mexican people. Purchasing power has risen and fallen since then, but the situation remains essentially the same as it was in 1984 to 1986, when I lived in Agua Prieta. People there worried constantly about consumption, but not just because they were deprived and wanted more stuff. It was because they relied on key purchased goods, services, and inputs (a good example being electricity) as an inescapable part of their way of life, and they faced difficulties in meeting those needs. Another reason they were so aware of consumption is that many of them worked in *maquiladoras* (factories) making goods (such as shirts and televisions) for the visibly wealthier U.S. market just across the boundary. Comparisons to the materialist colossus of the north were unavoidable. Precisely because Aguapretense were preoccupied with survival as consumers, they talked about consumption frequently and in heartfelt ways so that I follow their lead in studying and writing about this subject.[2]

In this chapter, I discuss three politics of consumption: the politics of perspective and knowledge, political ecology, and immediate political struggles over goods and services. The first topic is raised by comparing environmentalist and Aguapretense viewpoints. In the former perspective, consumption can be understood as personal but also troubling; in the latter perspective, it can be seen as a largely external force but also good. This is not to say that there is no objective ground to our discussion. Importantly, the tiny consumer actions of working-class Mexicans do have significant ecological effects when added up by the thousands and millions. A good example is beef consumption, which significantly increased when people migrated to the city from rural Sonoran villages (where ironically they raise but rarely eat cattle) and which in turn is linked to degradation of arid pasturelands (Sheridan 1988; Heyman 2001b, 148). These processes cannot be erased by declaring them simply matters of meaning and point of view. But inequalities in formulating knowledge and perspective are crucial to how facts are recognized and connected together and how policy (collective social action) is decided and implemented on ostensibly factual bases. In particular, anxieties about environmental damage in overdeveloped nations—indeed, I would say the projection of guilt from the self onto others—helps nongovernmental environmental organizations raise money and frame conservation policy in the underdeveloped world (Carrier in press).

The dominant politics of perspective on consumption favor two consumption policies. One, moral suasion, plays on people's environmental awareness and guilt to bring about conscious efforts at ameliorating environmental damage. Recycling is an excellent example because it is easy to make people aware of what they personally discard and recycling fits the emotional, personal, and volitional biases of our characteristic politics of ecological knowledge. The moral values embedded in everyday consumption, however, are internally complex and differ from setting to setting, specifically between working-class Mexicans and middle-class U.S. residents. The other policy is price incentives. Important

resources, such as fossil fuel energy, sometimes have artificially low prices that encourage their excess use. Even were the full market price to be charged, it does not take into account the full cost of environmental effects, such as global warming and smog. Under the "I want this car" assumption, changing the price structure should motivate people to use resources more appropriately and conservatively. But this assumes that prosperous consumers have a good deal of discretion and flexibility and can respond to price incentives by changing consumption intensities. As we shall see, raising resource prices amounts to a punitive tax for poor working people whose historically sedimented, intricately organized way of life does not permit them to cut back significantly on use of water, electricity, propane, and so on. Both moral suasion and price incentives have their place, but this chapter proposes that we widen our vision of politics to include popular involvement in making and learning environmental knowledge about consumption and that we also consider how to increase the capabilities of poor consumers to act on that knowledge.

Consumption As Human, Consumption As Capitalist

I learned about consumption in Agua Prieta from middle-aged to elderly women, the veritable masters of this craft. Not only had they spent many years doing laundry, cooking, cleaning, drawing water, and so on; but they actively monitored relative prices in two nations (Mexico and the United States); transmitted and received gossip about good deals on used furniture, appliances, and other consumer durables; and managed the blended income from their daughters' factory jobs, their husbands' day labors, their sons' undocumented work in the United States, and their own microscopic house-front stores. I also spent considerable time hanging out in small mechanical and welding shops, where I witnessed the equivalent male world centered on cars, trucks, and repairable appliance motors and mechanisms. Encountering consumption from this grassroots, ethnographic perspective, one is struck by the craft, intelligence, toil, meaning, and nurturing love for family members and friends encapsulated in consumption (Miller 2001). A good example of this at the border was Mexicans shopping in the United States, especially before the severe peso devaluations of the 1980s made it more expensive to buy things in dollars. Women's skill in knowing which groceries (chicken, fresh milk, diapers) were cheaper in the United States embodied both their dedication to the well-being of their families and their intellectual mastery of the complicated opportunities of border economics. And for housewives, getting out of the house was sheer pleasure. Prosperous working men told similar stories of shopping for used construction materials, welding supplies, car parts, and tools.

Consumption is indeed a rich, rewarding, and deeply human activity. Although cultures differ enormously in economic relations and material items,

there is no situation devoid of activities we can conceive of as consumption. Consumption is not just using up goods. Not only is there final consumption, such as eating food (and, of course, even what is referred to as final consumption produces waste products); but there are many activities of productive consumption, such as the unpaid and often unrecognized labors of housewives cooking food. At the same time, people conduct these life-renewing and life-affirming activities within specific ecological and social relations. The politics of who could get a local visa to shop in the United States (Heyman 2001a), the economics of purchasing mass-manufactured commodities, and the ecology of drawing on resources (for example, agro-industrial chicken) transferred from significantly different habitats all matter greatly. The different arrangements of this human fundamental, then, constitute our second politics of consumption and ecology, which we will approach through the prism of political ecology. An example of this level of analysis is the conversion of natural flows and substances into objects (commodities) that can be sold and consumed according to a metric (money) that differs in crucial ways from the transfer of energy and nutrients in nature (Greenberg 1998, Hornborg 2001). Another inquiry concerns the effects of capitalist relations on the organization of time and space, especially within the work of consumption. Important questions of perspective and policy on consumption and environment, then, cannot be understood without intellectual work at the level of political ecology.[3]

Political ecology of this sort, however, can be dauntingly abstract. It is hard to envision how one would concretely recognize it or go about studying it. Allow me, then, to digress briefly on how I studied consumption in Agua Prieta. I drew on four methods: participant observation, inventories of household material belongings, open-ended interviews focused on the histories of specific appliances, and contextualizing of ethnographic material with historical documentation. As mentioned, through participant observation (visiting people's houses, small stores, workshops, and so on), I was immersed in the daily life of consumption. With time, I applied more systematic methods to the subject. First, I collected a set of information about the material items in a family's house and yard; I also included the house itself and its components.[4] Questions included when and how acquired (given, purchased, and so on), from what person or store, for how much, whether or not the purchase involved credit or time payments, whether it was new or used when purchased, who it was considered to belong to, what it was used for (and if it worked), where in the house it was located, what was its quality and status, and so forth. The volume of goods (such as clothes and utensils) belonging even to a relatively poor border Mexican household is surprisingly large, and asking a robust set of questions about each and every item taxed the patience of my hosts and myself. I focused on items belonging to two sets. One was to inventory all the major tools of productive consumption: house, vehicles, major appliances, furniture, televisions, radios, and stereos. Then, to be

sure I had captured personal and collective meanings (not just practical chores), I selected ten items that were visibly decorative or that people volunteered to me as personally significant.

A second method stemmed from the first one, illustrating directly how to address political-ecological questions in an ethnographic way. This method consisted of long, open-ended interviews in which I systematically traced the history of houses, major appliances, and vehicles for eight households, going over some of the questions just listed (how acquired, when, and so on) but this time locating them in the more ample context of extended family histories collected at the same time. And I did this not just for the immediate item at hand (say, a propane stove) but for all previous items of the same kind or past technological equivalents: cast-iron woodstoves and, before that, shaped clay ovens. Importantly, my informants enjoyed appliance histories; and they readily and effectively made connections between key appliance dates and important events in their lives, such as marriage or moving from a peasant farm to a mining town or border city.

To contextualize these appliance histories, I drew on primary and secondary historical sources on northern Mexico and the western United States. The historical material enabled me to trace dates and places in major patterns of political, economic, and ecological change that had taken place in the region during the previous century and connect those patterns to the specifics of appliance histories. For example, one could identify times and places when typical Mexican goods that had been made either by consumers-users themselves or purchased from regional craftspeople were replaced by mass-manufactured commodities brought from the United States, either by returning migrant workers or by North American–owned mine company stores, and observe how this pattern had persisted to the present day in the Mexican border city (although today more goods are made in Mexico).

The analytic framework of this study brings together information and experience from multiple sources and analyzes dynamics at different scales, ranging from contemporary household economics to regional history. The approach illuminates connections between the geographic penetration of capitalism into Mexico, the commoditization of paid wage labor, the commoditization of unpaid labor (productive consumption), and the technological-ecological connection of consumers to fossil fuels and other commoditized natural inputs (water, electricity, propane, gasoline, and so on). It also pays attention to the personal meaning of these transformations. For example, Francisco, as a young man in the 1940s, learned to drive and repair a truck for a high country sawmill. Mechanical work became his lifelong occupation and fascination, which he passed along to his son, as I discovered when I visited their small workshop. He had used a new commodity, for a period had become a commodity himself (a laborer), yet remained a full human being alive with craft and intelligence.

Findings from this research, as well as in-depth discussions of the interpretation and analyses of the material, have been published elsewhere, forming the basis for the analytical generalizations that follow (see especially Heyman 1994a, 1994b, 1990, 1991, 1997, 2001b; Carrier and Heyman 1997). A key pattern that emerged was consumer proletarianization (Heyman 1994b, 180). *Proletarianization* is a social science term (originally from Karl Marx) that refers to the historical process by which people lose control of the means of production—land, tools, resources, and so on. Once people become proletarians, they have to work for the capitalists who own those means of production, thus bringing widespread wage labor into being. By imperfect analogy, consumer proletarianization refers to householders and localities that lose the traditional devices, raw materials, skills, and social relations needed to produce their daily existence: to heat their houses, cook their food, cover their roofs, and so on. In the consumer proletarianization case, the product (everyday goods and services) goes to individuals and families; but having lost the main means of self-provisioning, consumers must purchase commodity inputs from the capitalist economy—appliances, construction materials, grocery store food, manufactured clothing, and so on.

Classic Marxist literature focused specifically on paid labor outside the home and unconsciously embodied a male-gendered vision of proletarianization. Consumption, especially the unpaid labor and technology of household work, were slighted because of their association with women. Likewise, the separation of industrial production from household production and consumption isolates domestic labor from monetary market value and hence from the economy as narrowly defined by economists. I take my cue instead from the feminist revision of Marxist thought, especially Rayna Rapp's (1983) important concept of proletarianization from the household out. Studying this process answers the question "how did people become consumers?" at least in the contemporary sense of consumer. Fortunately, for northern Sonora, Mexico, I was able to trace almost all the changes that were involved.

Among the items that mark this process, stoves are particularly illuminating. Before the importation of U.S. household technologies began in the 1880s, Sonorans cooked on a variety of platforms using firewood. *Hornillas*, ovens made of unfired clay, were made and maintained locally (although the technology itself was Spanish in origin). Women made the ovens and replastered their sides as walls cracked or shed patches. Women and children harvested firewood locally. Cast-iron stoves replaced hornillas as early as 1900 in towns and by the 1950s and 1960s in the countryside. Such stoves also burned firewood but probably were more fuel-efficient than the older technology was. During the past three decades, gas ranges substantially replaced woodstoves, although many people retained woodstoves for times when the forty-five-kilogram cylindrical tanks of propane could not be refilled. Through this century-long sequence of technolog-

ical change, both the cooking device and the fuel shifted from being locally supplied to being externally purchased, industrially produced commodities; local roles at most consisted of small mechanical workshops where ranges were repaired.

Initially, I interpreted the causes of this change to be demographic and ecological shifts involving the movement of people into cities, where firewood was scarcer and more expensive, and denudation of timber by lumbermills, railroads (for railroad ties), and mine companies (for mine posts and to fuel roasters and smelters) (Heyman 1994b, 199–201). In other words, I hypothesized that consumer change happened when people were constrained from using the old technology. Jason Antrosio (2002), building on my work, offers a more sophisticated model for the adoption of stoves in Latin America, including their attractive qualities and meanings such as being modern, clean, and efficient. Stoves in this sense provide a means for women to provide supposedly better care for the family. Likewise, family members who earn money can pool resources to buy stoves, thereby showing dedication to the mutual family enterprise and especially the women (mothers and wives) who conduct it. This accords with the Sonoran evidence and suggests that consumer proletarianization occurs through attractions as well as constraints. For either reason, it is truly proletarianization since purchasers are no longer able to make the technologies themselves nor provide the main inputs; they are forced to consume. Once key skills (making and maintaining clay hornillas) disappear by not being transmitted to a younger generation, they are effectively lost forever. Thus, the political ecological perspective reveals that consumption practices are shaped by the technologies and practices available in particular historical and social contexts and that we cannot expect people to disengage from their existing ecological practices (such as burning propane or firewood) unless some other technology or mode of activity becomes available to them. The practice of household and community-regional self-sufficiency, while possible with a great deal of idealistic effort, becomes in practical terms increasingly unlikely, even unthinkable.

The political ecological perspective also encourages us to examine how capitalist consumption comes from and brings about changes in culturally organized time and space. A woman who grew up in a small farming community near Agua Prieta had moved to the border city to work in a shirt factory. Once she had woken with the dawn to collect water and wood and heat tortillas; now, as she bitterly recounted, her life was ruled by the alarm clock. The change was not a matter of sheer time; she probably arose earlier on the farm. Rather, it was the strict rigidity of schedule and the transfer of control from self to external device to conform to a factory work schedule. One could hardly find a better example to support the thesis of historian E. P. Thompson (1967), who argued that linked transformations in "time, work-discipline, and industrial capitalism" drastically changed the world view of proletarianized peoples. Were we to look further,

however, we might find that scheduling and time-space conceptions are also increasingly shaped by formal schooling. Not only do schoolchildren leave and reappear at set times, but the increasingly isolated housewife is deprived of their companionship and assistance in minding smaller children, lugging water, running errands, and so on. In conjunction with this increasingly rigid (and often complex) set of schedules, the demand for clean clothes increases as well as meals for hungry children and husbands returning to the home.

These time demands refract into the work routines and technologies of the household. Women coped with changing patterns of time and volume of material possessions by using blenders for chile sauces and refried beans, washing machines for cleaning clothes, and faucets and pipes to deliver water. (Lest it be thought that I impose an analysis on this material, women provided me with exactly this interpretation of blenders and washing machines.)

Let us focus on one particular technology, electric lights, that clearly alters the format of the day. As noted, the traditional rhythm of the day was set by dawn, dusk, and the demands of farm animals. School and factory schedules deprive the family of a significant block of time together in the middle of the day but correspondingly emphasize collective time (often around the television) in the evening. There is, furthermore, the prolongation of schoolwork into the evening. But the construction of the evening as a time for doing things, as opposed to quietly slipping into rest, demands interior lighting. This is reinforced by housing forms and practices that increasingly emphasize time spent indoors rather than in yards and under exterior, open-air roofed spaces. During my fieldwork in the 1980s, working-class Mexicans were just beginning this transition into lighted interior spaces and evening-oriented activities, and their use of electric lighting was still sparse to my North American eyes. But from a political ecology perspective, the lesson is clear: changes in the organization of time demand increasing use of electric lighting, produced mostly by burning fossil fuels while emitting greenhouse gases.

The political ecology of space is similar. While the largest user of fossil fuels, in the United States at least, is electric generation, the next largest source is internal-combustion engine vehicles for transportation (Barry Solomon, personal communication, 2001). The replacement of walking by motorized transportation had begun in Agua Prieta but had not progressed very far. Only about a quarter of working-class households I surveyed owned cars or trucks, and these households tended to use their vehicles more for hauling than for errands or commuting to work. But it was a quite small city, and people could walk or take collective vans (which operated as small businesses) to most destinations. Cities enlarge, however, as commerce moves from the small neighborhood store format to the large strip development store format, as industries locate in specialized areas, and as land prices dictate the separation of affordable housing from places of work and schooling. Then sheer distance and time required for walking

combine to force people to use cars or large-scale collective transportation to commute.

Modern consumption does not arrive alone. It requires new sources of income and credit and travels along novel paths of trade and commerce. In northern Sonora, I identified what I call channels of consumption change that included U.S.-owned mine company stores providing ample credit for North American goods; migrant laborers in the United States bringing back money, appliances, and tools for personal and family use; and peddlers (often smugglers) bringing back U.S. consumer items for the Mexican market, a trade significant enough to have a distinctive name, *fayuca* (Heyman 1994b, 183–91). Through these mechanisms, some locations come to be modern in terms of shopping, available cash, credit, and needed inputs (gasoline, electricity), and others are seen as apparently backward and boring. The geographic pattern of consumption channels thus reshape regional space—in the Sonoran case, orienting people in their migratory moves and lifestyle decisions toward larger cities in general and the U.S. border in particular (Heyman 1991, 15).

As the term *channel* suggests (as in television channel), we must consider the mass media in the political ecology of consumption. Movies were the first industrially produced mass entertainment to penetrate northern Sonora, entering via mine company towns and border cities, and commercially recorded music followed soon afterward. Television came much later, but it is widespread; in 1986, 70 percent of working-class homes in Agua Prieta had televisions, a higher rate than for many other appliances.[5] Thinking about mass media raises the important question of power relations between consumers and capitalist marketers—to put it more plainly, of whether or not people's desires are manipulated by advertising and marketing. One school of thought emphasizes the powerful manipulation of images and symbols to promote consumption (Galbraith 1985 [1967], 163–81). The other view is that successful marketers and advertisers largely sell what the consuming public itself favors or are punished by the market and at most promote fine distinctions among products. Another version of the latter position is that people reinterpret the items and symbols they do consume (Miller 1997).

A political ecology of consumption might help overcome this dichotomy by drawing on Karl Marx's (1977 [1867], 163–77) concept of commodity fetishism. A fetish is an inanimate object to which people attribute lifelike powers; commodity fetishism refers to understanding people and relationships among them through the objects they exchange, including metaphorical objects such as television images. Such "object standing in for person/relationship" thought processes occur in a variety of cultural settings (Appadurai 1986), but capitalist relations particularly heighten this phenomenon because people receive the items and images as anonymous commodities purchased in impersonal markets from large corporations rather than producing such items themselves or obtaining

them from local and regional markets. This means that even when consumers take an active stance, choosing goods from diversified marketers according to their own meanings and self-concepts, they may well fetishize social contexts, taking representative objects as the essence of groups and relationships.[6] It is rarely the case that commodities overtake all relationships; border Mexicans, for example, obtain many of their durable goods (appliances, furniture, and so on) from relatives and friends through gifts and sales, reinforcing rather than hiding the connection among persons, at least at the intimate level. Still, vital social phenomena come to be enacted as relationships among objects. In particular, households and communities dissolve into market segments of consumers, each designated by characteristic incomes and goods preferences, and each the target of particular marketing and advertising strategies.

The rise of commodified youth culture—which shapes a formative period in each person's life—is particularly important in this regard. Adolescence and young adulthood have long been marked by distinctive cultural practices in tension with adult-dominated society. But such phases end quickly, and young people are reintegrated into society, ready to succeed the roles of their parents. In border Mexico, as in many other places, the advent of migratory and local wage labor (starting in the early twentieth century) broke the need and duty of young people to defer to older generations; inheritance of resources like land and established community standing were no longer absolutely necessary for life. Instead, young people turned to new modes of relationship among people: factory labor markets, money from work in the United States, and even (for some youth) educationally based professional careers (Heyman 1990). These novel patterns favor commodity fetishism, emphasizing the person as a free agent, a money earner, a goods purchaser—that is, as a commodity her or himself—rather than son, daughter, brother, sister, and so on. Buying, possessing, and consuming personal goods with one's own money enacts this new sense of commodity-self. But ironically this commodity-self can be shared among youthful peers and is thus easily molded by mass-media entertainment and advertisers into a market segment marked by cheap, discretionary consumer goods like clothes, drugs, and music.

Of course, capitalist relations are never total, and young people rarely isolate themselves from the household relationships needed for everyday provisioning. This is especially the case for working-class Mexicans, who are so poor that children rarely can afford to live on their own and parents do and must claim part of their earnings for the family fund (unlike many U.S. youth, who tend to retain all their earnings for spending money). Instead, young people settle into a constant struggle with parents, as I will discuss, bringing some earnings home and retaining some for their own consumption. In Agua Prieta, for example, young women and men often bought with their factory wages knock-off designer blue jeans, using time-installment arrangements of four to eight

weeks of payments since they have so little discretionary money. They could then own a stylish pair of denims just like the Americans and rich Mexicans they saw in glossy variety shows and soap operas. Emotions of desire and fulfillment poured into these purchases, constrained as these youths otherwise were—working at mind-numbingly repetitive assembly plant jobs, fighting with parents for money, saturated by the artificial paradise of television, and stimulated at work and in the neighborhood by peers who were seeing the same images and feeling the same emotions.

We thus return to the question of relative power between consumers and marketers. Under conditions of strong but incomplete commodity fetishism, marketers succeed precisely if they empower consumers to choose among the objects that they sell. Insofar as marketing is well informed and technically capable, it recognizes and heightens finely differentiated social groups and their specific motivating symbols and images (Fine and Leopold 1993). The selling of consumption involves popular will, then, but in such a way that it strengthens the message to buy commodities. These changes, for which I have used youth culture as an example, cover a variety of novel social relations with significant consequences, in which consumption is both a cause and a visible indicator.

Political ecology thus demonstrates consumption's interrelationships with other social, cultural, and geographic changes as well as changes in the biophysical environment.[7] As we consider the profundity of the changes in the sale of labor, the organization of household work, the relationships of child to parent and woman to man, the sense and expression of self, and so forth, simply urging people to be less consumerist is ineffective, if not condescending. Some of the goods just described are relatively discretionary (although usually imbued with compelling commodity symbolism), but a great deal of it—stoves, washing machines, electric lights, motorized transportation, and so on—are nondiscretionary since people have few alternatives about how to solve fundamental problems of organizing time, space, and the production of daily existence except to use the technologies available in the marketplace and the supplies organized by utilities. We can thus understand better the perspective of working-class Aguapretense, who wanted more consumption rather than less. Their desire was not a matter of unrestrained greed or dreams of luxury amid poverty but the dream of surviving and surpassing the endless challenges of balancing and sustaining a way of life built around flows of money and credit, commodities, water, and energy.[8] Taken together, however, these small flows are important ecologically, including scarce water in this desert region, fossil fuel energy sources used directly (gasoline, propane) and indirectly (electricity), firewood, and materials consumed through the whole life cycle from manufacture to solid waste. In this highly pressured context we can understand the public conflicts swirling around consumption in Agua Prieta.

The Immediate Politics of Consumption in Border Mexico

By using the word *immediate*, as in "the immediate politics of consumption," we draw a useful contrast with long-term changes already described. The word focuses us on aspects of consumption in which there was an actual or potential conflict, whether among organized groups or between individuals falling into consistent social categories (for example, parents and children, women and men). During the 1980s in Agua Prieta, the ecological effects of consumption were *not* on the immediate agenda, although there were glimmers of other kinds of environmental politics (such as toxic waste produced by maquiladoras).[9] Rather, protests over price increases were the clearest instance of consumption politics at that time. In early 1986, the Mexican governmental electric commission raised electric rates by 50 percent. This took place at a time when the government ran a significant deficit, faced intense international pressure to reduce subsidies and expenditures, and operated an inefficient electric grid with widespread theft by the poor and numerous hidden subsidies to the industries and farms of the rich. Middle-aged women (primarily) and men affiliated with a radical Roman Catholic parish in a working-class neighborhood organized a midday march to the local offices of the electricity commission, voicing their grievances and obtaining the commission's promise to review a few bills that seemed to have increased by especially high amounts. The electric rate protest grew out of the central role of electricity in household technology, the measurable challenge that bimonthly electric bills posed for households with limited income and savings, and the crucial role that middle-aged women played as the managers of household interests, especially in the consumption sphere (Heyman 1994b, 227).

This protest, although it was not associated with a political party or a broader movement, raises the question of the wider role of consumption in politics. The recent successful overturning of Mexico's authoritarian one-party regime began with student protests in Mexico City in 1968 but received significant impetus in the 1980s when Mexico's debt to foreign banks ballooned, resulting in extreme currency devaluations and budget cuts to maintain the repayment schedule. On the production side, this meant the closure or downsizing of many government agencies and state industries. On the consumption side, it was manifested in very high inflation and consequent loss of purchasing power and, for border dwellers, a sudden reduction in ability to shop on the U.S. side because of the sharply increased value of the dollar against the peso. One cannot single out the consumer crisis as the prime mover of political change in Mexico; long-standing resentment of imposed candidates, corruption, and other features of one-party rule played crucial roles as well. Nevertheless, unhappiness about price inflation was a significant subject of conversations in Agua Prieta and important motivation for people to switch allegiances from the governing party to the right-wing

National Action Party (PAN in Spanish), which in 2000 finally obtained the presidency and shattered Mexican one-party rule.

This case suggests that loss of purchasing power, especially through dramatic price increases (such as those in electric bills), powerfully mobilizes popular political movements and that such movements are perhaps most often associated with the right wing of the political spectrum, which largely blames activist policies and governments for the problem rather than demands them as a solution. This is, of course, a bold hypothesis that I am by no means prepared to justify, but it is worth thinking about in terms of the immediate political ecology of consumption. It suggests that the price increase route to resource conservation will produce significant popular resistance and that such consumption politics may feed right-wing movements that generally lack environmental agendas.

Protests and parties encompass our stereotypical view of politics, but there were other domains of significant conflict and mobilization around consumption in Agua Prieta. One domain appeared to the individuals concerned to be personal and idiosyncratic; but when studied in multiple households, it turned out to be quite extensive and important: conflicts over consumption between parents and children and between husbands and wives—that is, involving the politics of gender and generation. The main earners of wages in Agua Prieta formed two groups: men from their twenties up, who worked at a variety of jobs, such as truckers, construction laborers, broom factory workers, and warehousemen, and contributed (usually but not always) to the support of wives and children; and young adult children of both sexes, but especially women, who worked in maquiladoras and contributed to the support of parents and siblings. In contrast, the main users of wages (to buy groceries, pay bills, and so on) were middle-aged people; in some households, men controlled family spending but in most cases women (considered housewives) controlled collective expenditures (Heyman 1994b, 229).

This scenario created constant struggles inside families over personal versus collective spending—over how much of the husband's earnings were brought home to the wife, how much of the daughter's to her mother. It was generally acknowledged that wage earners were entitled to some share of the money (a rhetorical rule of thumb in Sonora was that working children living at home could keep half their earnings and turn over half to their parents); but the real exchange was negotiated, often with considerable conflict, family by family. Behind this was the tug of war between the cost of the shared items and inputs required to make households work (whose character we have discussed) and the individualizing aspects of consumption, notably the making of self-conscious style and peer group–oriented consumption among youth. This politics is reproduced inside each family as members face the inherently contradictory tendencies of contemporary consumption. In turn, the differential understandings,

practices, and power within households influence decision making and activities that use resources and affect the environment.

Another political phenomenon with interesting implications for ecology was the struggle with the municipal government to get basic urban services, including water, sewage, and electric lines and adequate filling of propane tanks. This played into party politics in that local party operatives used these widespread desires to recruit and reward followers. We have already seen why these energy and material inputs and outputs are crucial for modern consumers houses. (Although different in character, one might add public schools to this category.) Such goods are most efficient when delivered through large-scale, collective infrastructures—for example, water mains with feeder lines to individual houses. For this reason, they can be termed *collective consumption.* Such collective activities significantly shape the urban form. The urban development pattern of Mexico—indeed, of much of the world—consists largely of people placing houses and streets and later agitating to obtain basic infrastructure (such as water and sewer mains) (Ward 1999). In spite of their significant cost to quite pinched households, people strongly desire these utilities and make considerable sacrifices in terms of both connection charges and contributed in-kind labor in digging trenches, laying pipe, and so on. The rationales are twofold: the time and physical energy savings in not having to haul water from delivery trucks or standpipes (and some form of sewage disposal, either septic tanks or drainage mains, is required once people have piped water), and the ability to access a more modern (better illuminated, cleaner) lifestyle with electricity, water, and so on. Clearly, then, there is a profound trend toward locking large numbers of households and wide swaths of towns and cities into collective infrastructures that favor the high-volume flow of basic resources and energy.

Through this analysis, then, we begin to recognize that the environmental effects of consumption often occur in the production and supply systems that serve consumers rather than being done by consumers themselves. That is, they are linked to the decisions of consumers, but the proximate source of environmental effects is the utility itself, usually a firm or a government agency. One might compare this to the difference between the environmental effects of throwing away a candy wrapper versus the greenhouse gases and particulates emitted when the plastic is manufactured for that wrapper. The political implications are significant. They bring into view the often ignored politics of supply organizations and collective or shared consumer technologies: how power is generated, water supplied, household technologies designed. People in Agua Prieta had little concept of these questions, but then most advocates and analysts of consumption ignore them also or blur them into a generalized consideration of consumerism. Yet they constitute a vital agenda for political ecology to contribute to the politics of consumption.[10]

Fusing Knowledge and Action

Recognizing that contemporary consumption has deep causes, rescuing these causes from the oblivion of ordinary life and capitalist mystery, and perceiving the immense scale and distant environmental effects of consumption acts: such steps profoundly challenge our capacity for understanding and action. The challenge faces scholars, activists, and everyday consumers (such as the Aguapretense) alike. Yet taking these steps seems to be the only way forward. We have already seen flaws in two ways in which environmentalists commonly approach consumption-price incentives and moralized rhetoric. Exhortation from the outside seems unlikely to be effective in two regards: it focuses attention on environmentally marginal consumption acts, not crucial ones (in terms of energy and material flows); and it ignores the constructive and creative qualities of consumption, especially how consumer goods help people cope with the challenges of capitalist life. Rather, it seems that people (including the people of Agua Prieta, this writer, and the readers of this chapter) need to investigate the social and environmental chains extending outward from their own consumption acts toward larger contexts. Their learning process will require dialogue between study groups and experts, which will enable people to have a greater sense of ownership of understandings and new ideas about practices.[11]

The production, delivery, and consumption of water, for example, are crucial topics for the largely arid U.S.-Mexico border region and one for which the knowledge and decisions of householders are as important as those of authoritative experts. Sarah Hill (2003) describes a water health promotion project in Ciudad Juárez, Chihuahua, Mexico, and El Paso County, Texas, that contains elements of the learning process approach. Although the project encountered classic political ecological variation (caused by the local political history and urban land tenure geography of the study communities), Hill documents significant and enduring learning about water in even the most difficult situations. (On water as a consumer good generally, see Chappells et al. 2001.)

But knowledge is not enough. Consumers need greater capabilities to act. *Capabilities* combine material resources with opportunities to set goals and determine appropriate means of action (Sen 1999). Thinking of amplifying capabilities broadens the concept of development from supplying more and better stuff to include the process of increasing self-determination. It seems particularly useful in the consumption sphere, where the debate has been trapped between "more is better" and "more is worse" without consideration of what "more" does for people. We need to give people capabilities to solve their challenges of time and space and to build on their positive experience of and control over consumption.

Let us continue our water example, then. Access was sought by the Aguapretense to address increasing demands for healthiness and cleanliness within rigid time schedules, as described. Raising capabilities for women and children might

well mean increasing access to and consumption of piped water. Given this context, knowledge of limited renewable water resources and depletion of fossil groundwater would be contradictory and perhaps ineffective if householders also do not have access to grants and loans to obtain water-efficient technologies for key domestic production processes (bathing, washing clothes and dishes, watering small gardens, and so on). But a program that paternalistically hands out water connections and technologies without popular goal setting and ownership of knowledge is likely to bog down in graft and false compliance. The concept of capabilities synthesizes both dimensions needed in practice and seems particularly well suited as a positive response to a political ecology critique of the status quo. (See Heyman 2003 on the relationship between critique and counterpart ideals.)

Ultimately, political ecology rests on understanding the importance of unequal power in our social-natural lives. Greed as an aspect of consumption assumes a certain level of power to command goods and resources, and guilt is the situational regret over doing this. By isolating the volition of the individual from its social context, these visions of consumption mystify the distribution of power in consumption and focus inward rather than toward an empathetic encounter with poorer and less empowered consumers' lives. They furthermore fail to capture the positive experience of consumption, its roles in satisfying our needs and enriching our practical and creative lives. At the same time, greed (if rhetorically exaggerated) captures some truth about the human relationship with biophysical flows and stocks, as consumption seizes the productivity of plants, animals, soils, aquifers, and so on for human use and returning most of the energy and mate- rials in relatively degraded form (Robertson 2001). In a sense, we produce our human selves by consuming and disposing of what surrounds us. Political ecology's critique, then, is not against consumption per se. Rather, it suggests that the arrangements by which we produce daily life matter profoundly.

NOTES

1. The literature on consumption and its environmental effects is voluminous. Fortunately, a few works identify and synthesize a great many sources. For consumption generally, consult Goodwin et al. (1997) and Miller (1995a, 1995b). Focusing specifically on the consumption-environment nexus, I recommend Cohen and Murphy (2001) and Stern et al. (1997), especially the chapter by Wilk. A valuable web site with both scholarly and lay articles on consumption is *http://www.jrconsumers.com*. Richard Wilk, an anthropologist at Indiana University, maintains the Global Consumer web page (http:// www.indiana.edu/~wanthro/consum.htm) and a page of graduate student reviews of books about consumption (http://www.indiana.edu/~wanthro/reviews.htm). The web page *http://dizzy.library.arizona.edu/ej/jpe/consumpt.htm* offers a short introduction to studying consumption in developing societies, also applicable to overdeveloped societies. Other notable works in anthropology include Antrosio (2002), Carrier (1995), Carrier and Heyman (1997), Chin (2001), Miller (1997, 2001), O'Dougherty (2002), Orlove (1997), Rutz and Orlove (1989), and Hansen (2000).

2. *Aguapretense* is the collective noun for the people of Agua Prieta, comparable to *New Yorkers* or *Californians.*
3. Another line of analysis draws attention to broad phases of capitalism, in particular the Fordist mass-production/mass-consumption nexus characteristic of the United States and the U.S.-dominated world system of the twentieth century. A succinct introduction is offered in Taylor's (1999) book on modernities.
4. James B. Greenberg initially worked on this method with me; the pioneering study is Lewis (1969). Another useful reference is Menzel (1995), a photographic compendium of homes and possessions around the world.
5. The introduction of television to Agua Prieta is an interesting case study in the political economy of consumption. Initially, televisions were brought back from shopping and migratory labor in the United States and were tuned to grainy American channels. In the late 1970s and early 1980s, the Mexican government installed transmitters in remote corners of the republic (notably along the northern frontier where the state feared losing political and cultural control), and households tuned into Spanish-language, mostly Mexican-origin programming from the multibillion-dollar, private but pro-government media conglomerate Televisa. A comparable anthropological study of television in Brazil is Kottak (1990).
6. Another effect of commodity fetishism involves the mystification of environmental and other forms of political action. The centralization of media production means that messages, even environmentalist ones, put recipients into a passive recipient role rather than a responsible one and come from outside rather than engage the local setting.
7. Status imitation is a widespread explanation of increased consumption: first the rich possess something, and then other classes imitate it. Such imitation has some explanatory force but needs to be viewed within a wider historical context of social change. In tributary relations of production, elites gain and express political domination through sponsorship of large parties and festivals, meaning that goods are collectively consumed. Under conditions of capital accumulation, elites cut back on costly redistribution in favor of personal and familial possession, some flaunted publicly (but not shared), some kept quite private (see, for example, Roseberry 1989, 1–2). In addition, cash incomes (perhaps from transnational migration, wage labor, and so on) become a novel means for subordinate classes to change their public status, escaping from a previously rigid class (or class-race) structure (Heyman 1994a, 139; Antrosio 2002, 112–13). On consumption and social inequality broadly, see Carrier and Heyman (1997).
8. In an article focusing on household economics (Heyman 1994b, especially 179–83), I suggested that we study the change from flow-conserving peasant households, which use cash, credit, and natural resources on annual and even longer cycles, to flow-through households, which gain income over short periods (weekly paychecks, for example) and pay monthly or bimonthly bills (such as utility charges) and consumer debts. Although both household economies use resource inputs and produce waste products, I suggest that the flow-conserving household economy probably has fewer extended environmental impacts than does the flow-through household.
9. More recently, a binational governmental environmental initiative—the Border Environmental Cooperation Commission (BECC, known as COCEF in Spanish)—has promoted a certain kind of collective environmental politics on the border, focusing on public works and remediation activities such as clean water, sewage treatment, and solid waste projects.

10. Taking these large-scale supply systems into consideration also gives us a better handle on the role of wealth inequality in the environmental effects of consumption. By demanding very different amounts of energy and goods from these systems, consumers with very different degrees of purchasing power share their environmental effects to considerably different degrees. It is estimated, for example, that each U.S. consumer uses eleven times the resources of each Indian consumer and that, in India, the national upper and middle classes account for most of that nation's output of greenhouse gases (Parikh et al. 1997).
11. My suggestion here owes much to an unpublished book manuscript by Marianne Schmink, Susan Paulson, and Elena Bastidas describing the project known as Managing Ecosystems and Resources with a Gender Emphasis (MERGE). A description of this project is available at *http://www.tcd.ufl.edu/merge/Case1Eng.html.*

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