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Poking Around Morelia's Garbage

Clanging bells, awful smells, and other trashy stories

MORELIA, Mexico

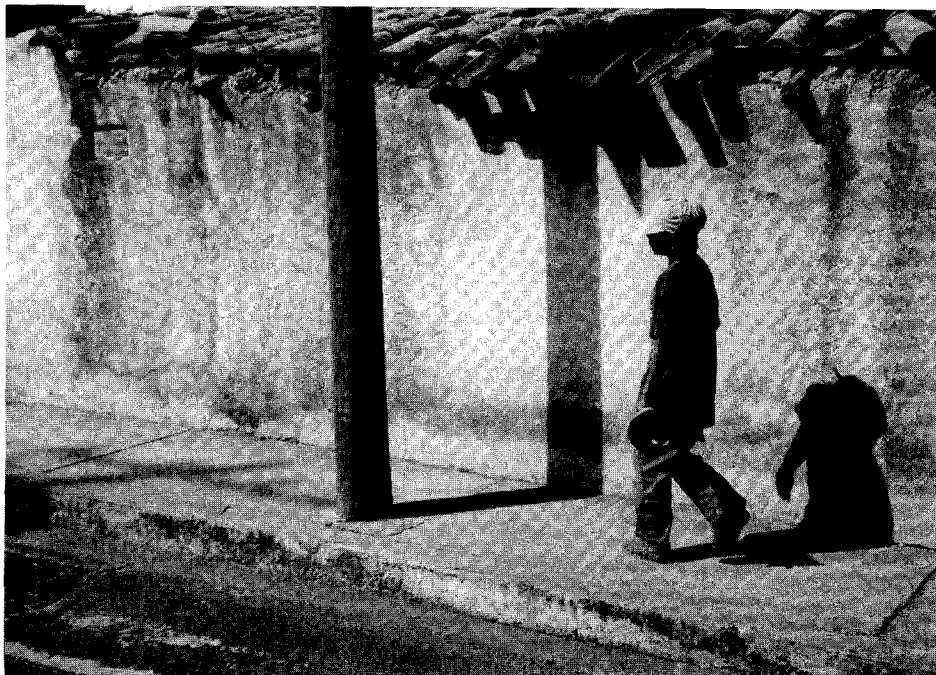
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By William F. Foote

What do you think people do in this traditional city of churches and steeples when they hear bells clang? Run to confession? Cleanse their conscience? No. They rush outside to unload garbage. On the hour, all day, on almost every street in the city of Morelia, prepubescent ragamuffins ring hand bells to announce the arrival of their families' garbage trucks. As the vehicles pass, people emerge from shadowed doorways, flinging trash bags onto the back, thanking drivers with pesos and smiles.

To an outside observer their bells may seem loud and incessant. Hundreds of rickety waste haulers — mostly old Ford pick-ups — might offend the eye. Rattling over the cobblestones, they spew black diesel exhaust, hold up traffic, drop milk cartons along the way. Yet to local citizens' ears, the "bell system" sounds like music, the jalopies clatter with grace. Indeed, people around here offer unconditional praise to the garbage collectors for having succeeded where the municipal government failed, for having cleaned up Morelia.

Not long ago garbage littered the city. Years of underinvestment in the waste-disposal system precipitated a bonafide garbage crisis in 1990. The Union of Municipal Trash Collectors staged a month-long strike. Roads, parks and schools filled with refuse. As is often the case in such situations in Mexico, political rows lurked beneath the rubbish debacle. In 1989, a member of the newly-created PRD (leftist opposition party) had become mayor. The PRI (Mexico's ruling party) marshaled the



An underage bell ringer working in Morelia.

strike in hopes of smearing his image under tons of rotting food.

In emergency mode, Mayor Samuel Maldonado appealed to any followers that owned trucks to pick up trash themselves. He offered them informal service concessions and suggested they collect tips to pay for gas. Soon the litter vanished and family garbage collectors proliferated. Five years later, an army of approximately 340 informal concessionaires and their underaged bell ringers dominate Morelia's garbage collection.

Significantly, the sound of Morelia's bells echoes the general clamor for efficient municipal waste disposal across Mexico. In recent decades, the country has been unable to keep abreast of the growing tonnage of waste. On one hand, Mexican cities have grown too much, too fast for too many years. On the other, Mexicans have discovered the world of junk consumerism. *Doritos* and other wrapper-happy snacks have seeped into even the smallest Mexican towns, as though floating on an inevitable tide of modernization.

Free trade helped shape these consumer habits — that and proximity to the trashiest consumers on earth (we *gringos* comprise five percent of the world's population and generate 40 percent of its trash!). While Mexico's new "throw-away" culture generates mountains of U.S.-style garbage, it causes multitudes of Mexican-style problems. Consider the 90,000 tons of trash produced per day in the country: only 60 to 70 percent is collected; the rest ends up roadside, in rivers, or in parks.

In most respects, Morelia is a typical Mexican city. It too bursts with people: current population hovers around 1.2 million, nearly eight times the 1970 estimated total of 160,000. It too faces a general public-services crisis. What is exceptional is that in the midst of recession, with over one million people throwing trash away, Morelia's streets are clean. Shouldn't we be happy? Hasn't the "bell system" proved a success? Would that it were so straightforward. Unfortunately, waste disposal problems never are. And, bells or no bells, garbage collection is just the first step toward bagging a solution.

I sidled up to the garbage truck and hopped into the passenger seat. A cork coaster with a Virgin Mary decal swung on a shoestring from the rear view mirror. I felt an assistant jump on back of the 1972 royal blue Ford pick-up; the axles creaked precariously. Trash bags piled against the back window blocked him from view, yet I heard his three knocks on the rusted car hull. The truck lunged forward.

Venturing around the corner, we stopped at a single-story concrete house. A middle-aged woman wearing pink slippers and a bathrobe stood behind black metal

bars surrounding her tiny sun-washed yard. "Morning Juan," she said, smiling at the sweaty assistant. Nodding to her politely, he opened the gate and grabbed a neatly-tied garbage bag, carrying it toward us. With a grunt, he slung the load up on the trash heap and then returned to the gate. "Thanks Señora Lopez," he said, slipping her two pesos into his pocket.



*Clanging for
garbage.*

"We feel like part of the community here," said Carlos Fausto Gutierrez, the driver, who has collected garbage for four years running in *Bellavista*, a middle-class neighborhood in southeast Morelia. "Sometimes the *señoras* even offer us *tacos* and Coca-Cola."

Mr. Fausto, 24, has more the air of a Virginia frat boy than a garbage collector. He wore a white tee-shirt covering a nascent beer gut. The number '84' displayed on his shirt's backside recalled a touch-football uniform. His easy grin and raised eyebrows read prankster. When we first met, for example, he immediately handed me his bell to ring; he wanted to rest. Within minutes, however, he'd switched jobs with his little brother, Juan, the 22-year-old assistant in back of the truck. After 10am, Carlos always gets to drive. Unfortunately, he never remembers to remove the cotton balls from his ears, protection from that clanging bell.

"What?" he repeated. For the third time I asked when they started in the morning. The brothers begin at 5:30am. They boast of returning home for lunch every day, too. Rolling on through the neighborhood, we passed another wheezing garbage truck, then another, and another. Carlos waved to each one, flashing fake smiles. Until now he'd been cheerful. After spitting out the window and wiping his mouth with a well-greased forearm, he complained that "there are



The Fausto brothers hauling trash to the city dump.

too damn many of us. You can't make money any more."

Apparently a swelling glut of competitors has thinned profits. Three years ago, a two-neighborhood cruise would have filled Carlos's truck. Tips came easy and juicy. To get the same load now, however, he has to service a dozen *colonias*. They crawl with competitors. "You feel like a buzzard sometimes, circling around the neighborhood, looking for scraps," Carlos said.

Trash collectors blame the government for their problems. Over the years, they claim, local authorities have bloated the number of concessions granted in exchange for political support. In addition, authorities have failed to define clearly the concessionaires' routes and collection zones. Hence, anyone can collect anywhere in the city — and they do. Still, the biggest complaint concerns garbage recycling.

Until 1994, private trash haulers could sell recyclable materials that they separated from the garbage. This supplemented tip income by about 50 percent. Once the garbage cans were brought out of the houses, either immediately or *en route* to the city dump, waste collectors would remove whatever saleable items they could: paper and cardboard, tin cans, glass, plastics.

The last municipal government (1993-95), however, banned the truck crews from scavenging the garbage. The mayor declared that recyclables were not theirs to sell. Rather, refuse pickers at the city dump — known as *pepenadores* — had exclusive rights to market reusa-

ble waste. Consequently, security doubled at the city dump, where guards allegedly began to examine incoming trash for signs of premature picking, like torn bags.

Sure enough, inspectors were waiting for us outside the landfill. At the sentry gate, set beside a tin lean-to, a stocky 40-year-old man in cowboy boots, jeans and dark sunglasses waved our car forward for inspection. Behind us, in clouds of dust, a feeble procession of trash trucks sputtered and coughed in idle gear. Craning my neck out the window to observe a mule-drawn garbage cart, I spied Juan pirouetting down the back of our pick-up, with a large bag full of tin cans in hand. He stashed the loot behind the lean-to. Beneath it, the four "inspectors" watched him from a legless couch, never blinking an eye. Behind the wheel, Carlos avoided my puzzled look. One hour later, as we left the wasteyard, Juan retrieved the hidden cans.

The best view of Morelia's landfill is from the top of one of two yellow municipal bulldozers parked on the dump's southern edge and used to spread trash around all day. From here one can look North across the flat-bed pudding of the 44-acre landfill toward the shimmering gray Sierra Madre mountains. A mile away in the opposite direction, a red-clay-colored cliff — part of a quarry — juts into a swirl of blue sky and clouds.

On our arrival, the clearing in the center was a beehive of activity. Forty or so people labored, surrounded by towering piles of clean cardboard, sparkling green bottles, a crayon rainbow of tin cans. From

*Carlos Fausto watches
pepenadores unload his
Ford pick-up.*



the vantage point of two mangy dogs dozing beside the bulldozer, the far-off stick figures must have resembled army ants carrying huge loads overhead and up wooden planks, dumping recyclables into one of five modern tipper trucks.

Later I learned this to be the final phase of the *pepenadores'* (garbage pickers) work. The trash loads they lugged, already selected and separated, are trucked straight from the dump to the buyers. Aluminum goes to Mexico City and to Guadalajara foundries; glass is used by local artisans and sold to the transnational Mexican glass company, Vidriera Mexicana in Mexico City; paper is used locally for press board and for roofing materials; and beverage containers (glass and PET plastic) go back to the bottler.

The *pepenadores'* work begins on the eastern border

of the dump, along a half-mile swollen lip of rubbish. That's where the Fausto brothers parked their Ford. The stench socked my nostrils as I opened the passenger door. No sooner had Carlos killed the engine than people emerged from the craters of surrounding garbage, as though plodding the surface of some trash-made moon. But the children, parents, and grandparents wore no protective suits as they pushed through Morelia's bowels; rather, they dressed in sneakers, long pants, tee-shirts, no gloves, and bandanas covering their noses. Wading toward us along a nearby garbage shoal, a teenage boy jumped onto the truck.

"We can't touch the trash now," said Carlos, crossing his arms in indignation behind his pick-up. Soon a trim, middle-aged man arrived and the two *pepenadores* manually unloaded our garbage, plucking out



*Garbage picker
plucking recyclables.*



Antorcha teenager carrying separated garbage loot away.

bottles and tin cans as they went, stuffing them into a burlap sack. They never said hello, never asked for permission. Noticing the general lack of cordiality, I asked Juan why they couldn't share the recyclables. He replied, very calmly, "because we're at war."

Who exactly are his adversaries? A total of 300 *pepenadores* that work Morelia's garbage dump (80 at a time), all of whom belong to *Antorcha Campesina*, a violent peasant organization connected with the PRI. Mexico's most notorious *grupo de choque* (roughly translated as attack group), *Antorcha* carries out much of the PRI's dirty work, having reportedly formed death squads in the past in several states. Their mortal enemies are the

rank-and-file of the PRD, Mexico's leftist opposition party. The Fausto brothers belong to a PRD-affiliated union of garbage collectors.

Dump battles flared in the summer of 1995. Sparking one incident, Carlos and three union buddies brazenly defied the *pepenadores'* trash-picking monopoly, repeatedly separating tin cans inside the landfill. One morning last August, approximately 80 *Antorcha* members armed with sticks and machetes surrounded Carlos's truck, smashing his windshield and his friend's face. Within minutes, 30 PRD union trucks came to the rescue, forming a rolling phalanx across the landfill. *Antorcha* withdrew and Carlos carried his wounded friend away without further violence. That same day, however, the then-PRI municipal government impounded his truck. The mayor had enforced the recycling ban in the first place to placate *Antorcha* leaders, according to Carlos. Eventually, he got his car back. He hasn't touched a can since. (That is, while inside the dump).

Hoisting the burlap sack of recyclable spoils overhead, the *Antorcha* teenager walked away from our Ford toward the busy clearing in the center. The fumes of baking garbage between us made him and the view beyond appear fuzzy and dreamlike: *Antorcha's* bottle-lined alleys glimmered like jewelry on display; great hills of *Sprite* and *Campbell's* soup cans glinted like old Spanish silver; cardboard stacks cut neat pathways toward the tipper trucks, whose engines roared like circus lions.

I turned back toward Carlos as he admired a new semi-trailer that *Antorcha* bought last November. Opening the driver side door, he paused and pointed toward the human ants climbing distant planks. "This is a good system, this landfill," he said, as if acknowledging *Antorcha's* achievements despite their conflicts.



Old woman stands waist high in waste.

"Nothing's wasted here, not even bones."

Thinking about the dump's benefits, I walked back around the front of the truck toward the passenger seat, spotting an elderly woman standing five yards away, waist deep in garbage. She wore a flour-sack dress, a baseball cap and sifted through the waste with her bare knuckles, plucking at a revolting pile of refuse: a cascade of burst tomatoes, empty egg crates, chewed corn cobs. Then she looked at me, at the gawking *gringo*. I dropped my eyes, focusing by chance on a closer, more horrifying heap of garbage: dozens of split-open blue plastic bags — hospital bags — brimming with needles, I.V. drips and bloody cotton swabs.

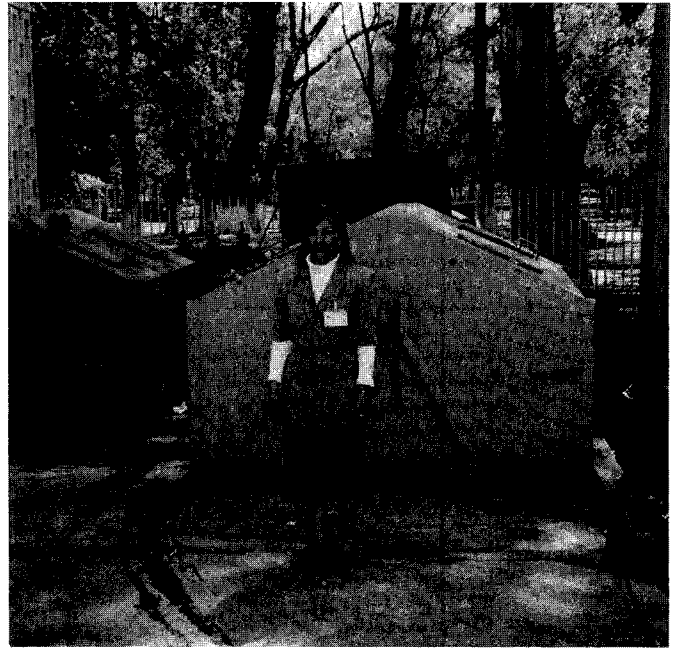
On Valentine's Day, I visited the Children's Hospital of Morelia, located on the edge of Cuauhtemoc Forest, a 10-acre park of ash trees and limestone fountains. Before lunch on any weekday, yelping school boys tear across the lawn beside the clinic, enjoying the only green soccer field in downtown Morelia. As I passed toward the hospital, they held the ball for me, giggling at a seventh-grade couple kissing on a nearby bench.

"They're totally unprotected," said Lourdes Salinas Gardu, referring to Morelia's hospital-waste deposits, not the valentines. Chief of social work at the hospital for the past five years, Salinas explained the problem over the screech of infants in the next room. The hospital generates approximately one ton per week of highly infectious garbage. With no incinerator, cotton swabs and placentas, some carrying tuberculosis, hepatitis and AIDS, go straight from the trash container out back to the city dump.

Morelia boasts about 20 medical facilities, including four major hospitals. Only two have incinerators, machines that rarely work, according to Salinas. That means the *pepenadores* push through 40 tons of potentially lethal trash per month, assuming each clinic produces half a ton of waste per week (a conservative estimate), as Salinas suggested.

How many garbage pickers have fallen ill? Nobody knows, no studies exist. However, a health official from city hall dropped by the Children's Hospital last week to apprise doctors of a forthcoming campaign to control infectious garbage. The number of sick *pepenadores* had reached alarming levels, according to the unidentified official.

Otoniel Buenrostro, a biologist who works for the Center for Ecology of the National Autonomous Uni-



Social worker Lourdes Salinas Gardu criticizes Morelia's Children's Hospital for infectious waste dumped into trash containers shown in background.

versity of Mexico (UNAM), has spent a considerable amount of time studying Morelia's trash. He looked surprised to hear of Salinas's frankness regarding the Children's Hospital. Apparently, most medical clinics consider infectious waste a taboo subject and deny any wrongdoing. Yet, in the course of his PhD research, Buenrostro spent many weeks working alongside *pepenadores* at the dump. He recalled his horror of the needed dangers lurking within:

"I saw people pricking themselves with syringes, cutting their skin on broken I.V. jars. I asked them what diseases they contracted, but they wouldn't say — they're a close-mouthed bunch. Everyone suffers from horrible skin problems, however. Who knows what now? I was there in 1988, remember, when AIDS and hepatitis were still rare."

If hospital wastes do poison *pepenadores*, might not the garbage pickers infect people back in Morelia? Possibly, yet some consider this a minor concern next to the ecological impact of the dump itself. For local environmentalists, Morelia's unplanned, poorly designed landfill is the deadliest needle and the earth its most innocent victim.

Sanitary landfills represent the lowest-cost method of safe waste disposal and predominate in Latin America.¹ They comprise several basic elements: location

1. In developing countries, resource recovery (composting, waste-to-energy incineration) can provide safe disposal of solid waste that is comparable environmentally to sanitary landfills. The cost of resource recovery, however, is usually significantly higher than the cost of sanitary landfill.



Spontaneous combustion — one of 50 garbage dumps burning today in the state of Michoacan.

above impervious land and away from high water tables; an impermeable liner (*i.e.* rubberized fabric) to avoid leachate seepage; a piped drainage system to collect both leachate and the highly combustible methane gas that decomposition of organic materials produces; and finally, a daily spread cover of earth to reduce potential problems with rats and disease.

Unfortunately, Morelia's dump fails on every count. Consider the location. "It couldn't be more inappropriate," said Juan Villanueva of Michoacan's State Ministry of Ecology and Urban Development. Apparently, Morelia's dump not only sits over sandy, porous soil, but a high water table, too. Hence, toxic leachate filters straight downward, unhindered. While Villanueva declined to quantify the level of aquifer contamination, local water authorities have suggested the immediate dump area to be contaminated for the next 60 years.

Poor wasteyard locations appear to be relative, however. Residents of the neighborhood of *Buenos Aires*, located in the northeast shoulder of Morelia, consider the current site — 18 kilometers outside the city — just fine. Why? Because the city's penultimate dump (1980-85) sleeps in their backyard. Two months ago, following the inauguration of a new well, *Buenos Aires* experienced a cholera outbreak. While authorities hushed the news, a team of garbologists, including Otoniel Buenrostro, determined that seepage from the moribund dump had poisoned the well.

A leachate drainage system might have avoided the cholera outbreak. No landfill in all of Michoacan has ever had one, however. In fact, in 1990, the government established Morelia's current dump west of the city precisely because the last one to the east had spontaneously combusted from an overabundance of flammable methane gas. Garbage fires raged for two years, spewing highly carcinogenic particulate into the Valley of Morelia and leaching toxic chemicals into the soil. According to EcoMorelia Director Carlos Padilla, smoldering trash heaps are widespread in Michoacan: of the state's 200 or so garbage dumps, approximately 50 are burning.

Ugh! Toxic bonfires, polluted aquifers, poisoned *pepenadores*, disgruntled collectors, dilapidated pick-ups, noisy bells, 1,300 tons of trash per day, and a major financial crisis. What's a city to do?

"With privatization we could resolve Morelia's trash problem in a matter of months," said Onesimo Constantino, project manager at Environmental Technology Services — *Servicios de Tecnologia Ambiental* (SETASA). In four months, he claimed, SETASA could vastly improve local garbage collection with specialized vehicles and newly-designed routes; build a state-of-the-art landfill; and draft plans for the installation of a garbage separation plant and recycling centers across the city. Depending on the municipality's resources,

SETASA also offers the latest waste-to-energy technology, like incineration and electricity co-generation.

On a smog-darkened morning in Mexico City, Constantino slurped coffee inside a Spartan office tucked within the behemoth headquarters of ICA, Mexico's largest construction company and the owner of SETASA. Specializing in treatment, management and final deposit of urban solid wastes, SETASA was founded three years ago in a since-dissolved joint venture with Waste Management, the largest garbage services company in the United States. Today, SETASA offers strictly Mexican technology, targeting medium-sized cities (500,000 average pop.) and dreaming of privatizing garbage systems across the country.

"With political will, any city can take advantage of the magnificent opportunity of modern, efficient waste disposal," exulted Constantino, as he guided me meticulously through a "pitch-book" presentation delivered to mayors across the nation.

Numerous cities in Mexico have already transferred partial responsibility for waste management to the private sector: Acapulco, Cancun, Cordoba, Cuernavaca, Monterrey, Puebla, Tlaxcala. Only one, however, has completely privatized: Nuevo Laredo, located on the U.S. border in the state of Tamaulipas. Constantino eagerly described SETASA's flagship project, his brown eyes sparkling like beer bottles at the *Antorcha* recycling camp.

"The Mexican Ecological Movement recently awarded Nuevo Laredo [a prize] for excellence in public cleaning service," he gloated. "Our system's been in operation for 18 months with great success. It features manual and mechanized street cleaners, garbage collection covering 100 percent of the city's 300,000 inhabitants and the only landfill in the country that complies with not just all of Mexico's environmental legislation, but international regulations, too!"

Might Morelia follow in Nuevo Laredo's footsteps? In 1993, local officials tried. As a wave of privatization of national industries swept Mexico (phone company, electricity generation, toll roads), bids to take over the operation and control of local waste management were received from North American companies, including Waste Management/SETASA. In general, the contractors offered to establish a system that would depend on increased use of modern equipment in place of intensive hand labor required by the current system.

Would-be privatizers ran into obstacles, however.



The Garbage Philosopher, Carlos Padilla Massieu, displays his latest composting box designs.

"Morelia lacked the political will of Nuevo Laredo," lamented Constantino, who managed the technicians that undertook the city's feasibility study. Local resistance to privatization ranged from wanting to tinker with the structure to thundering opposition and civil disobedience. In the end, all bids languished in city hall. However, none of the then-opponents appear to have forgotten that the proposals are still there.

"I defend privatization but fiercely oppose the general model Mexico has chosen regarding waste management," said Carlos Padilla Massieu, the outspoken director of local environmental group, EcoMorelia.

Padilla, who has the height, barrel-chested voice and pointed bushy eyebrows of elfin royalty, is known as Mexico's Garbage Philosopher. The nation's preeminent authority on trash and an itinerant resident of Morelia, Padilla elevates rubbish to literary levels. In February, I spent hours at his home listening to stories of

Tolkiensian adventures into the bowels of urban Mexico.

When guests arrive, Padilla takes them first on a tour of the outdoor path alongside the house to see his latest composting designs: three dirt-filled boxes framed with gray planks of recycled plastic, meant to accommodate varying levels of income and living space. Rounding the corner, he introduces his house's "lungs," better known as the backyard. Stepping up stairs and disappearing inside, Padilla requests visitors to wait in the library, a hobbit-sized room stuffed like a trash compactor with uncommon garbage literature. Here amid back issues of *Monthly Recycling*, Padilla pursues his life's mission: to cut trash generation in Mexico. "Garbage reduction is our only salvation!" Padilla declares, reappearing from the kitchen with two glasses of lemonade.

In the U.S. and Canada, private companies collect 90 percent of trash. The Garbage Philosopher thinks that's great, on one condition: that companies charge users (household, commercial, industrial) directly for refuse collection, not the municipality. That way, like other basic services — electricity, telephone — people pay for how much they consume. If they generate more trash, it costs more, and vice-versa.²

In the end, economic incentive — not ecological awareness — represents the only way to motivate people to educate themselves to separate recyclables and thereby reduce garbage generation, according to Padilla. Unfortunately, he explained, all trash-related privatizations in Mexico to date have featured direct payments between municipal governments and companies, instead of between companies and users. Said Padilla: "That's unacceptable and that's why I staunchly opposed SETASA's bid in Morelia."

Later I learned that one Mexican city has adopted Padilla's model. Puebla, the capital of the state of the same name, privatized garbage collection on the basis of a direct user charge. During the past year, however, the company failed to collect service payments from over 80 percent of its clients. Today, it's on the verge of bankruptcy, according to Constantino of SETASA. "I agree with Padilla's philosophy, but we don't have a culture for it yet in Mexico. People just don't want to pay for garbage services," said the engineer.

Bankers on the project-financing side agree with Constantino. Inside a wood-beamed, colonial office building just off the *zocalo* (main plaza) in downtown Mexico City, I spoke to the head of infrastructure

financing at the National Bank of Mexico — *Banco Nacional de Mexico* (BANAMEX), the country's largest commercial bank. Antonio Saldivar heads up a division created six years ago to help the government of President Raul Salinas de Gortari to privatize infrastructure services. In 1992, BANAMEX itself was privatized (having been nationalized in the debt crisis a decade earlier), and has since learned to monitor credits with the rigid discipline of the market.

"We must receive payments from municipalities," said Saldivar. If BANAMEX were to loan money to a company like SETASA, he added, not only would the bank require direct payment from the municipal government to the company receiving the loan, but BANAMEX would also require federal guarantees of those payments.

In general, given the financial instability of Mexico's local governments, the only vehicle for commercial bank participation in local infrastructure projects has been through the so-called *Garantia de Participaciones Federales* — Guarantee of Federal Allocations. Until December, 1995, the federal treasury guaranteed in certain cases both state and municipal liabilities precisely to foster commercial bank involvement in the country's infrastructure development. Obviously, the Feds could not guarantee direct payments from millions of household users, hence the impracticality of Padilla's scheme for a commercial bank.

BANAMEX has analyzed numerous garbage projects, yet the bankers have yet to find one they consider to be financeable. Why? "Because the imported waste technologies that generate high enough returns are unsuitable for the Mexican situation," explained Saldivar. In other words, fancy garbage treatment (e.g., mechanized separation, recycling plants, waste-to-energy incineration) depends on the arrival of refuse at the final deposit that is high in monetary and calorific value. If glass, plastics, metals, paper and cardboard go to scavengers on the way to the plant, the technology is useless.

Saldivar recalled a recent visit to a Swiss-designed separation plant in the western city of Guadalajara. It was an impressive place: huge rubber conveyer belts, men and women dressed in smart uniforms separating recyclable materials. However, practically the only thing that arrived were a few plastic bottles, as well as organic materials. Compost, however, has little commercial value. They closed the plant down last year. Remarked Saldivar: "Switzerland doesn't have wages low enough to justify people building careers in trash

2. Padilla dreams of importing the Swiss model to Mexico. In Zurich, for example, people buy per-month from a private company a certain number of certified garbage bags coded with serial numbers. When sold, the cost of the bag includes a collection service charge. These are the only garbage bags collected. Each bag says what they can put in, and where it should be deposited. Inspectors who periodically check contents upon collection can fine any wrongdoers according to the registered serial code. In this way, people become responsible for and pay for volume generated. The result: people have stopped throwing away recyclable materials (plastic bottles, paper, cans, chemicals and organic waste), thus reducing trash generation by 90%, according to Padilla.

dumps. Too bad those engineers didn't visit Mexico beforehand."

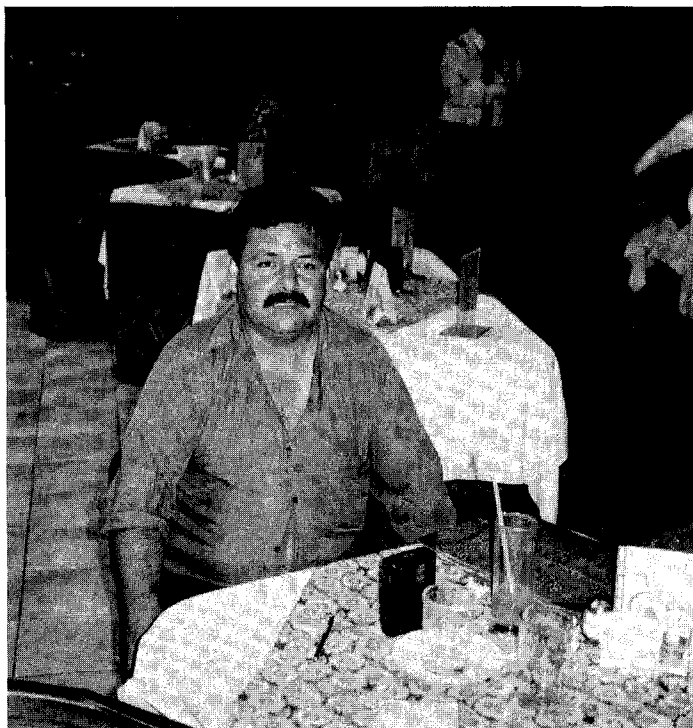
Back at ICA headquarters in Mexico City, Constantino implied that SETASA's divorce from Waste Management one year ago was related to similar technology issues. "The joint venture fell apart due to differences of opinion regarding Mexico's trash problem. Our cities have limited resources. Our garbage has its own characteristics. Hence, imported technology typical of an American or European city cannot be applied 100 percent to Mexico. In the future, foreign partners should be more flexible in their First-World solutions to Mexican realities."

Yet, if SETASA is so familiar with the local garbage condition, why do so many people in Morelia bristle at the mention of its name? "Because hundreds of us would lose our jobs with privatization!" said Isidro Fausto Gutierrez, secretary general of the Hermanigildo Galeana Union of Garbage Collectors of Morelia. Leader of 60 trash-truck drivers, Fausto's face went crimson inside a local restaurant as he painted his apocalypse: SETASA personnel replace union brothers, precipitating a five-fold decrease in the number of people collecting garbage in Morelia. "They would have us starve," he declared.

When I was at SETASA, Constantino judiciously avoided citing numbers regarding streamlining in Morelia, yet mentioned an analogous situation in San Luis Potosi. In that city, some 400 trucks currently offer service. Constantino said that no company trying to control costs could ever incorporate all 400 drivers and their 800 helpers. If a city needs only 50 specialized trucks — one for every 10,000 citizens — then local authorities should determine how to relocate the surplus. "We won't take on dead wood," Constantino explained.

Just as Fausto and followers won't float away. "We'll never accept privatization, not before — not now!" vowed the union leader, whose political power in recent years has swelled in sync with the city's trash problems. "We have our ways of stopping them," Fausto added, teasing a simple truth out of Morelia's trash troubles: privatizing the garbage system has never been a question of finance or technology, but politics. SETASA may blame the city's lack of political will, but then the company wasn't around on that fateful morning in 1993 when the mayor awoke to a garbage nightmare.

Picture a narrow cobblestone street lined with stalwart colonial buildings of warm pink stone with the look and feel of Salamanca, Spain. Midway down the block stands a fortress begun in 1770, the solidity of its impregnable walls softened by a French Bourbon doorway. From the parapets, a Mexican flag snaps in the



Mastering garbage politics in Morelia, trash collector union leader Isidro Fausto Gutierrez

early morning breeze. This is Morelia's city hall. Now imagine, heaped against its facade and reaching toward the second-story windows, a 20-ton pile of garbage, behind which horrified politicians eyeball the discards of their constituents.

"We showed 'em," said Fausto, chuckling in recollection. "I remember they'd invited us leaders one morning to watch promotional videos and drink coffee with a North American garbage company. Soon after, we gave them a breakfast they'd never forget."

That measure exposed the true extent of the garbage lobby's power. Today, eight unions of refuse collectors have become one of the city's biggest headaches. Turning their garbage men into rapid-response forces, leaders like Fausto have been able to ward off the unemployment that any modernization of the waste disposal system implies. At the same time, they've armed their respective parties with dirty political weapons.

Not long after the creation of the bell system following the 1990 garbage crisis, trash collectors became extremely useful cogs in local political machines. On one hand, they could paralyze traffic downtown with hundreds of grimy trucks, even bury city hall with garbage — useful tactics. On the other, as informal concessionaires they depend on political promises, not laws, which breeds fierce party loyalty. As such, since the beginning, Morelia's garbage collectors slipped nicely into Mexico's finely wrought system of intermediation

between parties, governments and the citizenry. So nicely, in fact, that their history has been shaped by a partisan struggle to gain a majority share of trash-hauler unions. Eventually, that competition spawned numbers so unwieldy that the politicians themselves lost control.

The leftist opposition party, the PRD, took the lead early on. During the administration of Mayor Samuel Maldonado (1990-92), three PRD collector unions emerged. Returning to city hall in 1993, however, Mexico's governing party, the PRI, pulled out all the stops to reverse control, eventually creating five more unions. The last one materialized as late as December, 1995.

"They promised to shut the registry after *Solidaridad* [the seventh union]," said Fausto, drinking orange juice at *Cafe Catedral*, located across the street from Morelia's main square and the 17th-century bishop's seat. "We were fools to believe them."

The diminutive union leader, who happens to be the older brother of Carlos and Juan, my chaperones at the city dump, holds a B.A. in history from the University of Michoacan. The wrist watch and powder-blue silk shirt he wore, however, suggested he chose the more lucrative career. Nevertheless, he assumed a detached professorial air when synthesizing the perceived crimes of his personal nemesis, Fausto Vallejo, Morelia's outgoing mayor.

"Vallejo was in bed with *Antorcha Campesina*," said Fausto, referring to leaders of the violent peasant group that controls both the *pepenadores* at the dump

and the eighth union of garbage collectors. In 1994, *Antorcha* demanded rights to collect garbage, specifically the coveted waste from restaurants, high-priced scraps sold to local pig farms. Those profits, they argued, would offset the losses *Antorcha* suffered from truck crews scavenging trash before reaching their *pepenadores* at the landfill.

Wanting to avoid clashes with the other seven unions, the mayor allegedly used municipal funds to construct a clandestine landfill north of the city where *Antorcha's* new union, CANIRAC, could dump. At the same time, he banned garbage collectors from separating waste, and prohibited local buyers of recyclables from doing business with anyone except the *pepenadores*. While inspectors began to monitor trucks entering the dump, the authorities shut down recyclers caught purchasing "illegal" materials from garbage collectors.

Martin Ramirez Milanez, 33, who runs a plastic recycling outfit located inside a corrugated-steel warehouse *en route* to the landfill, remembers when they padlocked his doors. "It was a bitter day, August 28th, but we're back in business now," he said, standing inside the building beside a broken-bottle compactor and a 15-foot wall of sanitized polypropylene containers.

Ramirez is a PhD student in chemical engineering at the University of Michoacan and an environmental activist. Unlike most recyclers, he had the gumption and/or education to fight back. "I spoke to the mayor. I talked to the *Comision Federal de Competencia Econom-*



Mr. Ramirez stands beside a wall of compacted recyclable plastics. Last year, the chemical engineer fought city hall to keep his doors open.

ica — Federal Commission of Economic Competition. I even wrote a letter to President Zedillo," said Ramirez.

In the end, despite his best efforts, Mayor Vallejo failed to satisfy *Antorcha*. In October, 1995, city hall was bathed once again in garbage — restaurant pig slop, no less, *parfum de swill*. Within weeks, *Antorcha* was officially inducted into the dysfunctional union family. In a last-ditch effort to muzzle everyone before November's local elections, Vallejo allegedly bought off all the garbage collector leaders: 6,000 pesos (U.S.\$800) per week to the *Antorcha*; 2,000 (U.S.\$266) pesos per week to each of the rest.

The PRI lost the election anyway. In January, Mexico's conservative party, the PAN, took control of Morelia's city government. Renowned for having no bed partners, the incoming administration seems to have been given breathing room. Recently, I visited the new head of the *Departamento de Aseo Publico* — Department of Public Cleaning (DAP). Behind high walls in a working-class neighborhood, his second-story office looks onto a veritable zoo of municipal waste vehicles: three white elephant-sized street sweepers, 14 dirty-mouthed garbage compactors, one yellow bulldozer.

"That was a truck graveyard when I arrived," said Armando Gonzalez Mendoza, 41, surveying the lot below with liquid brown eyes set behind a dark mane of a beard. A former economist with the federal government, Gonzalez called his predecessor an infrastructural saboteur. "The way he left this place was a crime," he said, noting that half of the department's 56 vehicles were broken and without spare parts. "They expect me to resolve long-term problems," he added, "but I can't do anything until the system's back up and running."

Gonzalez has made time, however, to meet with all eight leaders of the garbage collection unions, which he called his most complex problem. He blamed it on years of miscommunication. Gonzalez wants to foster dialogue, unlike his predecessor who avoided meeting with union leaders because, he said sarcastically, "they smelled so bad."

Two weeks ago, Isidro Fausto visited the DAP. During our interview, the union leader said he appreciated Gonzalez's gesture but kept on his guard. "I told him we'd back his administration until the second we caught wind of either support for corrupt [rival] union leaders, or privatization ideas," recalled Fausto, who warned that "if Gonzalez crosses us, we'll come down on him full force."

Several other meetings assumed an even more pugnacious tone. Some accused the PAN of subterfuge, of privatizing behind their back. They cited rumors that the municipality had already bought between 50 and

200 specialized collection trucks. "Don't I wish," said Gonzalez, laughing inside his office. "We don't have money for anything new."

Between his empty coffers, the rumor mills, the perceived threats, the implacable demands, and a general lack of interest in reflecting on anything other than the *status quo*, Gonzalez couldn't conceal his despair. "I've only been here a month," he concluded, as a grimy municipal garbage truck limped into the yard for repairs. "I must admit, however, I had no idea how bad it would be."

"Poor Mexico, so far from God, so close to the United States."

The words of former Mexican President Gustavo Dias Ordaz (1964-1970) find special meaning in the country's solid-waste problems. In recent decades, as Walmarts have replaced bombs as the preferred way to squash Third-World village life, the fallout of international consumerism has produced a rain of garbage from which the most remote jungles and deserted islands have no shelter. Next door to the reigning consumer nation, Mexico has absorbed harder downpours of First-World trash than any other developing country. In 1995, for example, it ranked second in world per-capita consumption of bottled soda, just behind the United States.³

Significantly, the country's poor crave *Coca-Cola* as much as the rich, producing just as much trash. Thoroughly integrated into the consumer economy, Mexico's downtrodden take solace in splurging at Kentucky Fried Chicken, Burger King and Denny's outlets that carpet the nation. They carry groceries home in plastic bags, drink from foam cups, preen themselves with canned hairspray. Such things have become the anodynes of poverty across the Third World. Yet, Mexico has a great yearning to consume like a first-class industrial power. Some people find that unacceptable.

"If all countries devoured and threw away like the U.S., which produces 40 percent of the world's trash with five percent of its population, we would destroy ourselves," said Garbage Philosopher Carlos Padilla. "Mexico cannot and should not imitate that unsustainable model."

But how do you combat the consumer culture? How do you reverse garbage trends in places like Mexico City, which had 200 grams of trash generation per capita in 1940 versus two kilos today? Or in Morelia, where over the same period people upped daily per-capita garbage loads from 100 to 600 grams? Furthermore, how do you tackle the increasingly toxic composition of Mexican trash? Before World War II, 80 percent of it was organic (e.g., biodegrad-

3. *El Financiero*, Feb. 29, 1996.



Carlos Padilla comforts Hermalinda Contra Linares, a municipal employee at one of the city's moribund recycling centers.

able orange peels) and only 20 percent inorganic (e.g. plastic bottles). Today, that relationship has inverted to 40 versus 60 percent, respectively.

"Environmental education is the answer," explained Padilla, sitting in his library beside a coffee table covered with recycling pamphlets and composting do-it-yourself manuals. He pulled out a shoe box containing a stack of color photographs, snapshots of Morelia in the early nineties, documentation of a successful program to involve local government in ecological instruction.

Padilla named the campaign "*Alto a la Basura*" ("Say No to Trash"). During the administration of PRD Mayor Samuel Maldonado (1990-92), he convinced the government to establish 16 recycling centers, or drop-off collection stations for separated household materials. Several covered containers at the sites were marked for specific recyclables such as paper, glass, metal and plastic. A municipal employee staffed each station. Concurrently, small receptacles placed on lampposts throughout the center of Morelia were marked and color-coded for various recyclables. To foster participation, local radio stations played catchy jingles ("*ponga la basura en su lugar*" — put the trash where it belongs). Schools and universities held conferences on citizen participation in waste management control.

"Within one year '*Alto a la Basura*' became a paradigm throughout Mexico for successful participatory

clean-up programs," said Josefina Maria Cendejas, 35, a philosophy professor who works with Padilla at EcoMorelia and who drafted scripts for the environmental radio programs. "The fact that partisan politics brought an end to it disgusts me," added Cendejas, referring to the decision of the ruling party, the PRI, to scrap the program upon recovering city hall in 1993.

Today, only two neighborhood recycling centers remain. On a sweltering afternoon in late February, Padilla and I visited one. As we pulled into the lot beside four M&M-colored steel containers, a corpulent woman with permed curls of unnatural orange emerged from a metal booth. Upon request, she sheepishly lifted the hatch on the green bin earmarked for glass recyclables. Inside, handy wipes, cereal boxes and beer cans littered a sea of bottles.

"They come here at dawn and dump their trash in front of the containers, all mixed together, and I have to clean it up myself," complained Hermalinda Contra Linares, who has manned the drop-off station for one year. "I didn't know that stuff was in there," she claimed, scrunching her nose and peering back into the cavern. Padilla looked at her sympathetically. "Don't worry Linda," he said, "you're a hero for sticking with it." She thanked the Garbage Philosopher, grinning broadly, eyelids fluttering.

That drop-off station may disappear soon. Without proper maintenance, recycling centers become focuses

of infection. In the past two years, neighborhoods across the city have demanded their removal. Happy to erase their predecessors' legacy, the municipality deposited the colorful containers at the dump, where they remain today like finger paints on a brown garbage canvas.

The *Centro Educativo de Morelia* — Educational Center of Morelia (CEM), a grade school perched on a verdant ridge facing northward toward the city, called the authorities three months ago to request the removal of their recycling bins. Located on the far end of a soccer field, the containers had become a menace. "They were totally abandoned, there were rats, and parents complained," recalled teacher Gabriela Fernandez.

Fernandez, who designed CEM's environmental education program ten years ago, is keeping her recycling faith, however. Her classroom brims with proof: student folders made from Frosted Flakes boxes; re-usable plastic water cups inscribed with kids' names; an assortment of teaching materials fashioned from household discards; and, of course, garbage-separation boxes.

"People used to think we were weird," said Fernandez, referring to reactions to her hands-on environmen-

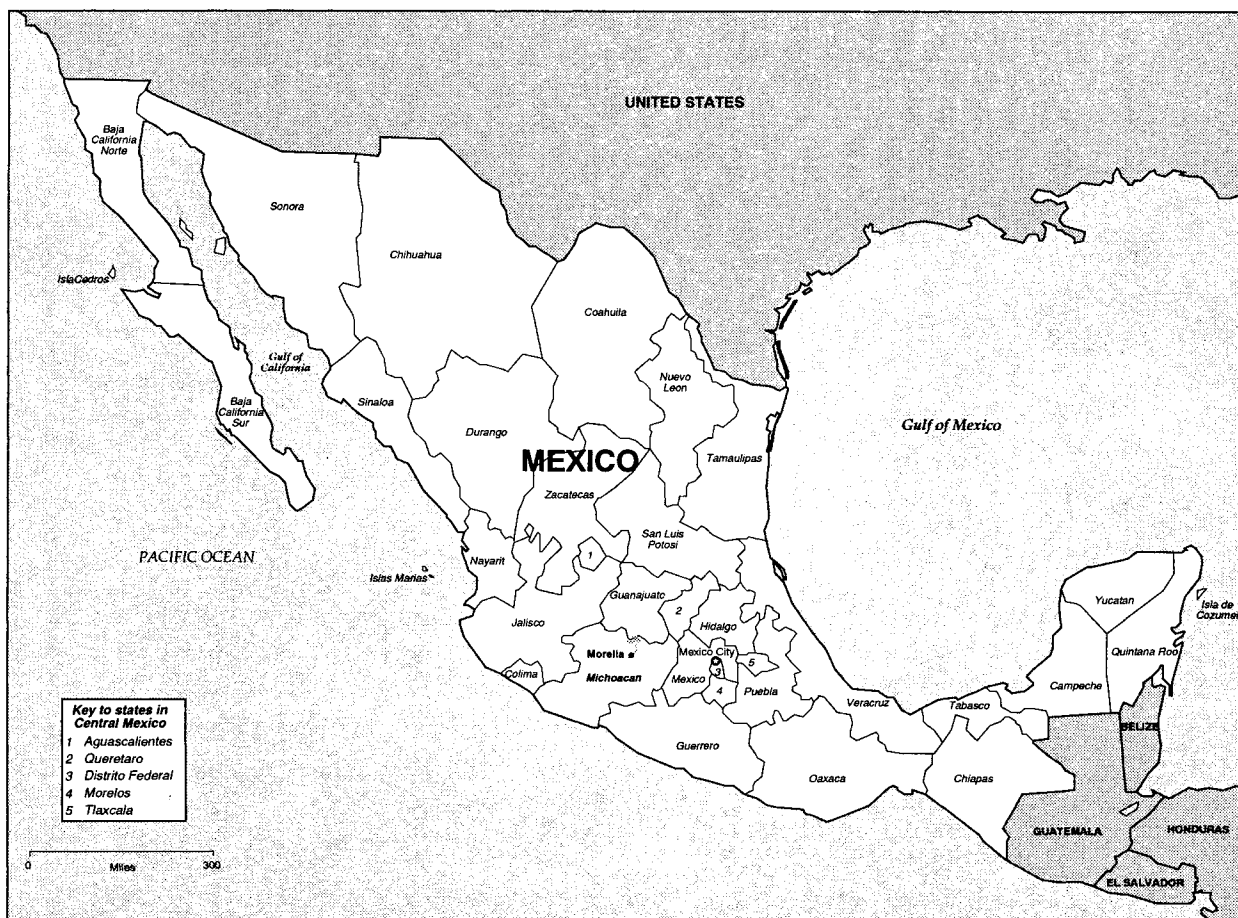
tal teaching methods. On field trips to the store, for example, students examine irresponsible food packaging, identifying unnecessary layers of plastic. "I want them to become conscientious consumers," she said.

That hope keeps Fernandez optimistic. She's doesn't read too much into the loss of the recycling center. She continues her yearly campaign to reinstate *Alto a la Basura*. She knows that her school's separated wastes mix back together upon collection; but says, smiling, "that's not our concern." Her concern, rather, is that children become responsible for their link in the chain. The missing links, she believes, will come later if Mexico relies on education for its garbage problem.

Or is it that Mexico relies on the garbage problem for its education? Back in the neighborhood of *Bellavista*, where I began poking into Morelia's trash dilemma four weeks before, Carlos Fausto told me a secret. Quieting his clanging bell as I approached, he answered my inane question about the number '84' on his tee-shirt. "It's for a soccer team I play on at the University of Michoacan," he said. Turns out Carlos is a fourth-year law student. I promised not to tell anyone. Nobody at school knows he pays his way collecting their trash. □



CEM teacher Gabriela Fernandez turns Kellogg's cereal boxes into homework folders and educates children to consume with conscience.



Institute Fellows and their Activities

Hisham Ahmed. Born blind in the Palestinian Dheisheh Refugee Camp near Bethlehem, Hisham finished his A-levels with the fifth highest score out of 13,000 students throughout Israel. He received a B.A. in political science on a scholarship from Illinois State University and his M.A. and Ph.D. from the University of California in Santa Barbara. Back in East Jerusalem and still blind, Hisham plans to gather oral histories from a broad selection of Palestinians to produce a "Portrait of Palestine" at this crucial point in Middle Eastern history. [MIDEAST/N. AFRICA]

Adam Albion. A former research associate at the Institute for EastWest Studies at Prague in the Czech Republic, Adam is spending two years studying and writing about Turkey's regional role and growing importance as an actor in the Balkans, the Middle East and the former Soviet bloc. A Harvard graduate (1988; History), Adam has completed the first year of a two-year M. Litt. degree in Russian/East European history and languages at Oxford University. [EUROPE/RUSSIA]

Cynthia Caron. With a Masters degree in Forest Science from the Yale School of Forestry and Environmental Studies, Cynthia is spending two years in South Asia as ICWA's first John Miller Musser Memorial Forest & Society Fellow. She is studying and writing about the impact of forest-preservation projects on the lives (and land-tenure) of indigenous peoples and local farmers who live on their fringes. Her fellowship includes stays in Bhutan, India and Sri Lanka. [SOUTH ASIA/Forest & Society]

William F. Foote. Formerly a financial analyst with Lehman Brothers' Emerging Markets Group, Willy Foote is examining the economic sub-structure of Mexico and the impact of free-market reforms on Mexico's people, society and politics. Willy holds a Bachelor's degree from Yale University (history), a Master's from the London School of Economics (Development Economics; Latin America) and studied Basque history in San Sebastian, Spain. He carried out intensive Spanish-language studies in Guatemala in 1990 and then worked as a copy editor and Reporter for the Buenos Aires Herald from 1990 to 1992. [THE AMERICAS]

Sharon Griffin. A feature writer and contributing columnist on African affairs at the *San Diego Union-Tribune*, Sharon is spending two years in

southern Africa studying Zulu and the KwaZulu kingdom and writing about the role of nongovernmental organizations as fulfillment centers for national needs in developing countries where governments are still feeling their way toward effective administration. She plans to travel and live in Namibia and Zimbabwe as well as South Africa. [sub-SAHARA]

John Harris. A would-be lawyer with an undergraduate degree in History from the University of Chicago, John reverted to international studies after a year of internship in the product-liability department of a Chicago law firm and took two years of postgraduate Russian at the University of Washington in Seattle. Based in Moscow during his fellowship, John is studying and writing about Russia's nascent political parties as they begin the difficult transition from identities based on the personalities of their leaders to positions based on national and international issues. [EUROPE/RUSSIA]

Pramila Jayapal. Born in India, Pramila left when she was four and went through primary and secondary education in Indonesia. She graduated from Georgetown University in 1986 and won an M.B.A. from the Kellogg School of Management in Evanston, Illinois in 1990. She has worked as a corporate analyst for PaineWebber and an accounts manager for the world's leading producer of cardiac defibrillators, but most recently managed a \$7 million developing-country revolving-loan fund for the Program for Appropriate Technology in Health (PATH) in Seattle. Pramila is spending two years in India tracing her roots and studying social issues involving religion, the status of women, population and AIDS. [SOUTH ASIA]

Teresa C. Yates. A former member of the American Civil Liberties Union's national task force on the workplace, Teresa is spending two years in South Africa observing and reporting on the efforts of the Mandela government to reform the national land-tenure system. A Vassar graduate with a *juris doctor* from the University of Cincinnati College of Law, Teresa had an internship at the Centre for Applied Legal Studies in Johannesburg in 1991 and 1992, studying the feasibility of including social and economic rights in the new South African constitution. While with the ACLU, she also conducted a Seminar on Women in the Law at Fordham Law School in New York. [sub-SAHARA]

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