

## NAFTA AS A SYMBOL ON THE BORDER

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*The North American Free Trade Agreement (NAFTA) has two faces: the real and the symbolic. Although the "real" NAFTA—tariff-free trade, increased investments, and new mechanisms for cooperation on environmental protection within North America—has been substantially successful, NAFTA as a symbol of disappointed hopes for a better life and fear of globalization continues to resonate in the popular discourse. Because the NAFTA experience is shaping the debate over future trade policy, this Article distinguishes the symbolic NAFTA from the real NAFTA. With respect to environmental conditions along the U.S.-Mexican border, two examples of the importance of this distinction are maquiladora factories in northern Mexico and the recent cross-border development of power stations and other energy facilities.*

*This Article argues that the popular link between NAFTA and border area maquiladoras is based on several faulty beliefs, including that maquiladora growth since NAFTA has been confined to the border area. Rather, maquiladora development and location, and the environmental and social problems associated with rapid industrialization, are manifestations of global processes and Mexican policies that began long before NAFTA. NAFTA provides new mechanisms that have improved some of the worst environmental conditions along the border. Nevertheless, serious maquiladora problems persist and make up part of the symbolic NAFTA. Major responsibility for correcting those problems, however, lies with Mexican national policy and administration; the United States and the maquiladora businesses can contribute to this effort.*

*Intensified energy development in the border area could place additional stress on environmental conditions in the form of air pollution, demand for scarce water supplies, and construction of energy facilities in sensitive coastal areas. The real NAFTA leaves energy subject to many national and local restrictions, and the legal status of electricity trade remains ambiguous. This presents an opportunity for federal, state, and local governments to capitalize on NAFTA as a positive symbol of closer economic integration and political cooperation in order to develop comprehensive transboundary energy planning and regulation for the region. The North American Commission for Environmental Cooperation, a NAFTA institution, has pointed the way with an important study of cross-border transfers of electricity under NAFTA. The governments of all three NAFTA countries need to work in closer*

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*partnership to overcome the problems contributing to NAFTA's negative symbolic power and to realize the benefits of NAFTA as a positive symbol of our shared continental enterprise.*

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## INTRODUCTION

When George H.W. Bush, Carlos Salinas de Gortari, and Brian Mulroney convened in December 2002 to celebrate the tenth anniversary of their signature of the North American Free Trade Agreement (NAFTA, or the Agreement), the occasion attracted little media attention. How can it be that this formal anniversary<sup>1</sup> of such an important agreement—one that the style editors of the *New York Times* spell “Nafta” because the acronym

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1. NAFTA was signed by the three countries on December 17, 1992, marking their acceptance of the final text in the three languages—French, Spanish, and English—as the embodiment of the agreement that had been reached in August 1992. After the signature, each of the three governments had to go through its own ratification or legislative adoption process. This occurred in 1993, allowing NAFTA to come into force, as originally scheduled, on January 1, 1994. Some NAFTA deadlines are measured from the date of signature, others from the date of its entry into force.

has become a word in itself<sup>2</sup>—could slip by with so little notice? After all, as this Symposium itself demonstrates, NAFTA still resonates strongly in the social, environmental, and economic discourse within North America. In newspapers, television, and community forums, NAFTA remains controversial. In 2002, Bill Moyers produced a show on investment disputes under NAFTA with the ominous title *Trading Democracy*.<sup>3</sup> More recently, labor leaders and environmental advocates on both sides of the border touted a Ninth Circuit ruling that stayed U.S. implementation of NAFTA's trucking access provisions as a victory for the health and safety of U.S. citizens, and against the corporate and political forces that promote the untrammelled free movement of goods and services.<sup>4</sup> A June 2003 analysis concludes: "The Mexican government wholeheartedly chose the free trade path for development. It is now clear where that path has led: declining living standards, a degraded environment, and a government that does not address the basic needs of its citizens."<sup>5</sup>

The insights of cultural anthropologist Ann Kingsolver may explain the lack of media interest in the tenth anniversary reunion of the NAFTA signatories despite the popular resonance of NAFTA critiques. Kingsolver remarks that the negotiation and implementation of NAFTA created a "public space" for discourse about its effects, but that the Agreement itself was (and is) largely "inaccessible" to the public because of its legal and technical density, and also because it is difficult to get a copy of the text.<sup>6</sup> Even if the environmental and labor side agreements to NAFTA are correctly included as part of the "real" NAFTA's new trade and investment rules and new intergovernmental organizations, the legal instruments and their associated institutions have scarcely penetrated the

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2. E.g., Jodi Wilgoren, *The Ex-Extemporaneous Howard Dean*, N.Y. TIMES, Sept. 15, 2003, at A13 (discussing questions about Dean's support for and opposition to "Nafta").

3. *NOW with Bill Moyers: Trading Democracy* (PBS television broadcast, Feb. 5, 2002, available at [http://www.pbs.org/now/transcript/transcript\\_tdfull.html](http://www.pbs.org/now/transcript/transcript_tdfull.html)).

4. Henry Weinstein, *U.S. Court Bars Mexican Trucks*, L.A. TIMES, Jan. 17, 2003, at A1; Press Release, Public Citizen, Public Citizen Applauds Court Ruling That DOT Erred in Opening Border to Mexican Trucks Without Studying Environmental Impacts (Jan. 16, 2003), available at <http://www.citizen.org/pressroom/release.cfm?ID=1304> (last visited Oct. 3, 2003).

5. Timothy A. Wise, *NAFTA's Untold Stories: Mexico's Response to North American Integration*, <http://www.americaspolicy.org/pdf/reports/0306globalization.pdf>. The paper cited is based on a recently published book, *CONFRONTING GLOBALIZATION: ECONOMIC INTEGRATION AND POPULAR RESISTANCE IN MEXICO* (Timothy A. Wise et al. eds., 2003). This book appeared too late to incorporate its analysis more fully in this Article.

6. ANN E. KINGSOLVER, *NAFTA STORIES: FEARS AND HOPES IN MEXICO AND THE UNITED STATES* 2, 15–19 (2001).

public consciousness outside a coterie of business people, policy analysts, and activists.

Kingsolver further observes, "In the absence of the document itself, NAFTA/el TLC became a symbolic entity invested with hopes, fears and agency—the power to change lives and nations."<sup>7</sup> Criticisms of NAFTA, whether new or old, are "counterstories" that people tell in response to the official "neoliberal stories"<sup>8</sup> that trade advocates recite touting NAFTA's success. The U.S.-Mexican border region<sup>9</sup> offers an especially well-studied microcosm of the many changes that have accompanied the "real" NAFTA. It is also rich in counterstories reflecting the reactions to NAFTA as a symbol of the hopes and fears of residents contending with changing circumstances along the border.<sup>10</sup> Public Citizen titled one of its early critiques "NAFTA's Broken Promises: The Border Betrayed."<sup>11</sup> Ten years later, the tone of neglect and betrayal of the border persists. A recent *San Diego Union-Tribune* op-ed portrays the lead pollution in Colonia Chilpancingo, Tijuana, as "the legacy of U.S. and foreign-owned industries operating in Mexico under the auspice[s] of the North American Free Trade Agreement."<sup>12</sup> After recounting this Chilpancingo counterstory, Joel Simon comments:

Perhaps it was, in part, the hopes and expectations created by NAFTA that had left Sánchez Pachuca so deeply disappointed. Despite the promises, the attention, and the visit from President Salinas, Sánchez Pachuca was still fighting the same fights and

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7. KINGSOLVER, *supra* note 6, at 2. "El TLC" refers to the acronym for the Spanish name for NAFTA: el Tratado de Libre Comercio.

8. *Id.* at 60–65. I also adopt Kingsolver's caution that this classification "is only a heuristic for organizing stories that promote and counter NAFTA for various reasons." *Id.* at 65.

9. In formal terms, bilateral accords between the United States and Mexico designate the area one hundred kilometers north and south of the border as the "border region." Agreement on Cooperation for the Protection and Improvement of the Environment in the Border Area, Feb. 16, 1984, U.S.-Mexico, T.I.A.S. No. 10,827 [hereinafter *La Paz Agreement*], available at <http://www.epa.gov/45mexicoborder/efpaz.htm> (last visited Sept. 8, 2003). In this Article, I will use the term more loosely, though most of the specific information I cite or cases I mention fit within this formal region.

10. Recent manufacturing job losses in Texas border cities, for example, have been connected to NAFTA. Joel Millman, *Mexican Border Workers Suffer as Plants Relocate South*, WALL ST. J., Mar. 26, 2002, at A20 (noting that the migration of jobs has coincided with the phasing-out of U.S. duties on items such as textiles and footwear).

11. PUBLIC CITIZEN'S GLOBAL TRADE WATCH, *NAFTA'S BROKEN PROMISES: THE BORDER BETRAYED* (1996) [hereinafter *PUBLIC CITIZEN*], with the subtitle "U.S.-Mexico Border Environment and Health Decline in NAFTA's First Two Years."

12. Connie Garcia, *NAFTA, Fast Track and Toxic Pollution*, SAN DIEGO UNION-TRIB., July 17, 2001, at B9.

making the same speeches. "Governments come and go and nothing ever changes," he said bitterly.<sup>13</sup>

The burgeoning populations,<sup>14</sup> intense economic development,<sup>15</sup> and environmental stresses<sup>16</sup> in the border region are legendary. These trends began during World War II, yet those who give current accounts of the social inequities, economic hardship, and environmental degradation in the border region often frame them as NAFTA counterstories, suggesting that NAFTA significantly altered the dynamics of the region. The premise of this Article is that in assessing NAFTA's impact, it is not sufficient merely to note the changed conditions during the last ten years. In the continuing public recitation of NAFTA counterstories and neoliberal stories, which are tailored to influence trade policies for the present and future, it becomes particularly important to separate correlation from causality. This Article will attempt to do so by distinguishing between effects attributable to the "real" NAFTA of tariff-free trade, new investment rules, and intergovernmental cooperation on some border issues, and effects attributable only to the "symbolic" NAFTA, which arise fundamentally from such non-NAFTA factors as local and national policies and the shifting terrain of global macroeconomic conditions. Of course,

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13. JOEL SIMON, *ENDANGERED MEXICO: AN ENVIRONMENT ON THE EDGE* 235 (1997).

14. The population on the U.S. side of the border area grew by more than 17 percent during the 1990s, while on the Mexican side it exploded by over 40 percent. Norris Clement et al., *The U.S.-Mexican Border Economy in the NAFTA Era: Implications for the Environment*, in *THE U.S.-MEXICAN BORDER ENVIRONMENT: ECONOMY AND ENVIRONMENT FOR A SUSTAINABLE BORDER REGION: NOW AND IN 2020*, at 55, 59-63 (Paul Ganster ed., 2002). The net result for the metropolitan areas of border sister cities is exemplified by the San Diego-Tijuana region, which grew by 25 percent between 1990 and 1999. John R. Weeks, *Demographic Dynamics of the San Diego-Tijuana Region*, in *SUSTAINABLE DEVELOPMENT IN SAN DIEGO-TIJUANA: ENVIRONMENTAL, SOCIAL AND ECONOMIC IMPLICATIONS OF INDEPENDENCE* 17, 18 (Mark J. Spalding ed., 1999) [hereinafter *SUSTAINABLE DEVELOPMENT*].

15. At least until 2001, job growth was strong in the cities of the border region. Employment growth in U.S. border areas almost doubled from an annual rate of 1 percent to about 1.9 percent between the pre-NAFTA early 1990s and the post-NAFTA mid-1990s. On the Mexican side, the comparable yearly job growth rates rose from 5.9 percent to 6.8 percent. Clement et al., *supra* note 14, at 60, 62. The number of *maquiladora* export plants in the Mexican border states has increased by 87 percent since 1990. MIGUEL ÁNGEL TORRES GUERRERO, TEX. CTR. FOR POL'Y STUD., *THE EFFECTS OF INDUSTRIALIZATION AND THE MAQUILADORA EXPORT INDUSTRY ON THE ECONOMY, HEALTH AND ENVIRONMENT OF AGUASCALIENTES* 64, 78 (2002). Employment in all *maquiladora* plants, three-quarters of which are located in the border region, peaked at around 1.2 million workers in 2000. The basic employment data is cited in many sources, see, for example, Graham Gori, *Latest Data Dampen's Mexico's Hopes*, N.Y. TIMES, Apr. 12, 2002, at W1. Between 2001 and 2003, however, about one-fifth of those jobs were lost. *Mexico's Jobless Rate Hits a 6-Year High*, N.Y. TIMES, Sept. 20, 2003, at C3 (reporting more than 250,000 *maquiladora* jobs lost in the last two years).

16. Many sources cite the litany of environmental pressures on the border region and the degraded quality of its air and water. For one such report focusing on San Diego-Tijuana, see Paul Ganster, *The Environmental Implications of Population Growth in the San Diego-Tijuana Region*, in *SUSTAINABLE DEVELOPMENT*, *supra* note 14, at 35.

NAFTA itself is a reflection and expression of the national political and economic landscape in all three countries. There is no bright line around NAFTA that isolates it from national policies. Nevertheless, it is useful to distinguish between the economic forces unleashed by NAFTA and the related legal changes modulating those forces on the one hand, and the substantially distinct realms of national policy (including transportation, education, and rural development programs) that are primarily determined by local political and economic considerations on the other hand.<sup>17</sup>

For this analysis, the symbolic NAFTA presents a dual challenge. On the one hand, the perception that NAFTA has “the power to change lives and nations” allows commentators to assign blame for observed conditions to this “inaccessible” but powerful force.<sup>18</sup> On the other hand, the same commentators also argue that persistent social and environmental problems demonstrate that NAFTA has failed precisely because it has *not* transformed lives or nations in anticipated ways.<sup>19</sup> A senior Mexican NAFTA negotiator recalls that he told the Mexican Senate in 1992 that “[T]he agreement will not be a panacea. Now that the negotiations have concluded, I want to reiterate this idea so that no false expectations are created.”<sup>20</sup> The currency of NAFTA counterstories demonstrates that such official cautions notwithstanding, NAFTA created expectations that in many instances have been disappointed.<sup>21</sup>

Although the symbolic NAFTA attributes more influence over people’s lives and the policies of their nations to the real NAFTA than it has had,

17. SIMON, *supra* note 13, whose book was published by the Sierra Club, conscientiously made the distinction, with results that “surprised” him:

It was Mexico’s economic crisis (which had driven down the cost of labor) combined with the globalization of the U.S. economy that had brought the factories to the border. It was a failed development strategy emphasizing rapid industrial development that had brought the workers. Compared with these weighty processes, NAFTA seemed almost beside the point. The uproar directed against the treaty was really a response to enormous forces of global change, which . . . linked the United States and Mexico more intimately than ever before.

*Id.* at 3.

18. E.g., Wise, *supra* note 5, at 4: “The free trade model in Mexico is designed to take advantage of Mexico’s comparative advantage in low wages, with the country’s decades-old *maquiladora* export assembly sector as the engine for industrial development. For Mexican workers, this has meant two things: exploitation and expulsion.”

19. “All three governments boasted that the deal would support broader social goals, from creating good jobs to cleaning up the environment . . . On these indicators, NAFTA is a failure.” John Cavanagh & Sarah Anderson, *Nice Theories, Sad Realities*, FOREIGN POL’Y, Sept.–Oct. 2002, at 62. In a similar vein, Pat Buchanan says that NAFTA promised a democratic government in Mexico, a rising standard of living, an expanding U.S. trade surplus with Mexico, and fewer illegal aliens. “NAFTA is a failure on all four counts.” Patrick J. Buchanan, *Don’t Eat the Strawberries*, *Bill*, May 22, 1997, <http://www.buchanan.org/pa-97-0522.html>.

20. Jaime Serra & J. Enrique Espinosa, *More Accuracy, Less Activism*, FOREIGN POL’Y, Sept.–Oct. 2002, at 63, 65.

21. For an entire book couched in counterstory terms, see LESLIE J. ROCKENBACH, *THE MEXICAN-AMERICAN BORDER: NAFTA AND GLOBAL LINKAGES* (Stuart Bouchey ed., 2001).

NAFTA counterstories should not be dismissed as expressions of antitrade hypochondria. "The notion of a tight, direct link between political perceptions, institutions, and behavior and the empirical effects of trade and integration is misguided."<sup>22</sup> From the perspective of trade policy and its appropriate concerns with legitimation,<sup>23</sup> the mood of the public discourse matters regardless of its erroneous factual premises.<sup>24</sup> "Storytelling, like silence, is not innocuous."<sup>25</sup> The poor social and environmental conditions in the border region mean that NAFTA as a symbol has failed. That symbolic failure "has important implications for a host of new trade agreements now under consideration."<sup>26</sup> If trade liberalization promoters want to legitimize the economic benefits that the real NAFTA has generated, they have to find ways to improve the lives of people on the border.

Nevertheless, one cannot begin to formulate appropriate policies without distinguishing the real NAFTA from the symbolic. Part I of this Article lays out the analytical premises for making that distinction. To elucidate the distinction, Parts II and III examine two prominent topics concerning trade in the border region: the environmental and social effects of the *maquiladora* industry,<sup>27</sup> and the environmental effects of the currently uncoordinated development of energy facilities. The analysis will show in detail that counterstories about NAFTA's deleterious effects on the border region invoke the symbolic NAFTA rather than the real one. Of course, the real NAFTA has had an economic development effect,<sup>28</sup> but that effect, I argue, has been rather modest in comparison to other factors influencing economic development and the environment in the last ten years. Close analysis of *maquiladora* industry development, in particular, shows

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22. John Bailey, *NAFTA's Impacts on Mexico and the United States: Subregional Effects of Trade and Economic Integration*, in U.S.-MEXICAN ECONOMIC INTEGRATION: NAFTA AT THE GRASSROOTS 1, 3 (John Bailey ed., 2001) [hereinafter NAFTA AT THE GRASSROOTS]; Anthropologist Kingsolver is rightly emphatic on this point: "I do not want to separate the 'real' or lived effects of NAFTA from the symbolic space I focus on in this book. They are intertwined." KINGSOLVER, *supra* note 6, at 2.

23. See, e.g., The Symposium on Globalization and Governance, 7-SPG Widener L. Symp. J. 1 (2001).

24. Bailey, *supra* note 22, at 3, further observes that, "the effects of trade and integration in both the United States and Mexico are filtered through various 'lenses' and can be misperceived (or unperceived) at the level of public opinion for a variety of reasons."

25. KINGSOLVER, *supra* note 6, at 2.

26. Wise, *supra* note 5.

27. *Maquiladora* refers to a Mexican company operating under a special customs regime which allows the *maquiladora* to temporarily import into Mexico on a duty-free basis machinery, equipment, materials, parts and components, and other items needed for the assembly or manufacture of finished goods for subsequent export. It also benefits from certain reductions in domestic taxes. The vast majority of *maquiladoras* are subsidiaries of foreign corporations and perform final preparation or assembly work on imported parts or materials. For a description of the legal regime that governs *maquiladoras* see *infra* text accompanying notes 82–85.

28. The economic effects stem more from NAFTA's often overlooked investment and services provisions than from its removal of tariffs and quotas on traded goods.

that NAFTA's stimulus to trade and to export businesses in Mexico is largely an effect—not a cause—of deeper processes at work.<sup>29</sup> Energy development in the border area shows a failure of national and local governments to transcend the border with a comprehensive policy for planning, constructing, and regulating energy facilities for the region. They still have the opportunity, however, to fulfill NAFTA's symbolic promise.

The influences that have truly transformed the economy of the border region are exogenous to the real NAFTA, yet are captured in NAFTA as the locally salient symbol of national and international dynamics operating before and after January 1, 1994. NAFTA counterstories embrace many local, national, and global factors bearing on the region that have little to do with the effects of NAFTA as such. Even though the real NAFTA is the wrong target, these counterstories touch on real conditions, and raise legitimate policy questions. Their message should not be ignored. Part IV, therefore, concludes the Article by drawing some policy lessons from the successes and failures of NAFTA as the symbol of our common aspirations for a better life and a better environment in North America.

## I. SORTING NAFTA FROM OTHER INFLUENCES ON THE BORDER

There are compelling reasons to distinguish between the real and symbolic NAFTA in the quest for a better understanding of the consequences of trade policy on environmental and social conditions. At the same time, we must recognize that this task cannot be accomplished with complete precision. This part explores some of the analytical difficulties, and establishes a historical frame of reference for the specific discussions of *maquiladoras* and energy trade that follow in Parts II and III.

### A. Putting NAFTA's Economic Effects Into Global Perspective

Ample data on the exchange of goods and services within North America support neoliberal claims of NAFTA's success at a general level. Quantitatively,

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29. For example, Harold James argues that "technical changes and efficiencies of scale . . . have made purely national markets relatively inefficient." *Measuring Globalization: Who's Up, Who's Down?*, FOREIGN POL'Y, Jan.-Feb. 2003, at 60, 70, (quoting HAROLD JAMES, THE END OF GLOBALIZATION: LESSONS FROM THE GREAT DEPRESSION (2001)). Similarly, Robert Gilpin asserts:

The idea that globalization is responsible for most of the world's economic, political, and other problems is either patently false or greatly exaggerated. In fact, other factors such as technological developments and imprudent national policies are much more important than globalization as causes of many, if not most, of the problems for which globalization is held responsible.

ROBERT GILPIN, GLOBAL POLITICAL ECONOMY: UNDERSTANDING THE INTERNATIONAL ECONOMIC ORDER 9 (2001).



NAFTA has met or exceeded most of the expectations created for it ten years ago.<sup>30</sup> The total value of goods flowing from one country to another within North America has doubled, from \$297 billion in 1993 to \$622 billion in 2001.<sup>31</sup> In 1999, Mexico overtook Japan to become the United States' number two trading partner (Canada has long been number one). Flows of foreign direct investment from one NAFTA country to another skyrocketed, with inflows to Mexico rising from approximately \$3.5 billion per year before NAFTA, to more than \$13 billion per year since 1994.<sup>32</sup> Sectors once closed to foreign investment or foreign service providers, such as Mexican banking and telecommunications, are now largely open.<sup>33</sup> On January 1, 2003, tariffs and quotas on certain agricultural products were removed, the penultimate tranche in a liberalization of trade in agriculture that, by 2009, will fully lift tariffs and quotas on all agricultural goods.<sup>34</sup> In the global context, meanwhile, certain consequences feared ten years ago have not materialized. NAFTA appears not to have diverted much trade to North America from other parts of the world,<sup>35</sup> nor has it eroded support for multilateral trade liberalization through World Trade Organization (WTO) agreements.<sup>36</sup> On its own terms, then, NAFTA has been a resounding success.

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30. See, e.g., GARY CLYDE HUFBAUER & JEFFREY J. SCHOTT, *NAFTA: AN ASSESSMENT* 11–32 (1993) (evaluating the overall trade and employment effects of NAFTA).

31. OFFICE OF THE U.S. TRADE REP., *NAFTA AT EIGHT: A FOUNDATION FOR ECONOMIC GROWTH* (2002) (a joint report of the three trade ministers), available at <http://www.ustr.gov>.

32. Jaime Serra & J. Enrique Espinosa, *The Proof Is in the Paycheck*, *FOREIGN POL'Y*, Sept.–Oct. 2002, at 60, 60 (citing data from NAFTA AT EIGHT, *supra* note 31).

33. The United States has delayed for more than four years opening its market to trucking services as NAFTA requires. One more delay remains: On January 16, 2003, the Ninth Circuit Court of Appeals ordered the Department of Transportation to prepare a full environmental impact statement before implementing rules changes designed to honor the NAFTA commitment. *Pub. Citizen v. Dep't of Transp.*, 316 F. 3d 1002, 1032 (9th Cir. 2003).

34. Only scattered remnants of closed systems remain, such as the U.S. requirement that all maritime traffic between two U.S. ports be carried on American ships, or Mexico's continuation of a national petroleum company closed to outside participation. Those remnants remind us that NAFTA is, after all, not a simple agreement to make trade free but a complex structure of mutually self-serving arrangements that protect culturally and politically sacrosanct enclaves of exclusion.

35. JAIME SERRA ET AL., *REFLECTIONS ON REGIONALISM: REPORT OF THE STUDY GROUP ON INTERNATIONAL TRADE* 26 (1997) (concluding from an analysis of "trade concentration ratios" that for NAFTA "the evidence of significant trade diversion is less compelling, although some diversion certainly seems to have occurred").

36. While it has inspired Mexico and the United States into more vigorous negotiation of additional, linked regional trade pacts, these new trade pacts probably say more about the delays and obstacles in achieving significant new trade liberalization through the WTO than they do about the interest of NAFTA parties in capturing benefits from trade regionalization. Richard H. Steinberg, *Explaining Similarities and Differences Across Trade Organizations*, in *THE GREENING OF TRADE LAW: INTERNATIONAL TRADE ORGANIZATIONS AND ENVIRONMENTAL ISSUES* 277, 298 (Richard H. Steinberg ed., 2002), concludes that for issues like the environment that are ancillary to trade policy, "progress is likely to be slow in the GATT/WTO." For a fuller argument that countries seeking to insert environmental issues into the trade context have greater political power to achieve that goal in a regional context, see Richard H.

But as a matter of rigorous economic analysis, it is difficult to isolate the discrete components and proportions of change in trade and investment flows that are the “effect” of NAFTA (in the sense that they would not have occurred except for the implementation of NAFTA’s changes in tariffs and other rules). As one study summarizes the problem, “the economic effects of free trade remain largely indirect, and are generally transmitted through changes in relative prices.”<sup>37</sup> Economists try to control for the multiple variables that affect the thousands of individual transactions contributing to each year’s national or sectoral trade data. However, interpreting the welter of trade and investment data is as much art as it is science, as much a matter of intuition, experience, and world view as of the specific methodologies applied.<sup>38</sup>

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Steinberg, *Trade-Environment Negotiations in the EU, NAFTA, and WTO: Regional Trajectories of Rule Development*, 91 AM. J. INT’L L. 231 (1997). In a similar vein, Sylvia Ostry states, “[w]hat is most frightening is the paralysis of world leaders.” She calls leadership the “vital missing ingredient” under either the NAFTA or WTO models. Sylvia Ostry, *Fix It or Nix It? Will the NAFTA Model Survive?*, in LINKING TRADE, ENVIRONMENT, AND SOCIAL COHESION: NAFTA EXPERIENCES, GLOBAL CHALLENGES 319, 322–23 (John J. Kirton & Virginia W. Maclaren eds., 2002). The dramatic failure of the Cancún ministerial meeting of the WTO in September 2003, to make any progress on the “Doha Round” of trade negotiations in the WTO confirms Professor Ostry’s pessimistic appraisal. Associated Press, *WTO Reeling From Trade Defeat in Cancun*, Sept. 15, 2003, <http://www.nytimes.com/aponline/business/AP-WTO-Trade-Talks.html> (last visited Sept. 16, 2003).

37. COMM’N FOR ENVTL. COOPERATION OF N. AM., *FREE TRADE AND THE ENVIRONMENT: THE PICTURE BECOMES CLEARER* 6 (2002) [hereinafter *THE PICTURE BECOMES CLEARER*], at <http://www.cec.org/files/pdf/ECONOMY/FreeTrade-en-fin.pdf> (last visited Sept. 8, 2003). The Commission has pioneered analytical work in this area. The report cited here summarizes the results of CEC work culminating in an October 2000 symposium, proceedings of which were published by the Commission. See *THE ENVIRONMENTAL EFFECTS OF FREE TRADE: PAPERS PRESENTED AT THE NORTH AMERICAN SYMPOSIUM ON ASSESSING THE LINKAGES BETWEEN TRADE AND ENVIRONMENT* (Oct. 2000) (2002), available at <http://www.cec.org/files/pdf/ECONOMY/symposium-e.pdf> (last visited Sept. 8, 2003). Another symposium presenting further studies focusing on energy and agriculture was held in March 2003. See *Second North American Symposium on Assessing the Environmental Effects of Trade*, <http://www.cec.org/symposium> (last visited Oct. 3, 2003).

38. After several years of work by experts on the methodologies for studying the environmental effects of trade and discussion of the methodologies by other experts, see, e.g., COMM’N FOR ENVTL. COOPERATION, *BUILDING A FRAMEWORK FOR ASSESSING NAFTA ENVIRONMENTAL EFFECTS: REPORT OF A WORKSHOP HELD IN LA JOLLA, CALIFORNIA ON APRIL 29 AND 30, 1996*, available at [http://www.cec.org/files/pdf/ECONOMY/builde\\_EN.pdf](http://www.cec.org/files/pdf/ECONOMY/builde_EN.pdf) (last visited Sept. 8, 2003), the CEC opted for an “analytical framework” for such studies that eschews specific methodologies in favor of a broad framework that steers analysis toward certain fundamental and common questions about the environmental effects of trade. See COMM’N FOR ENVTL. COOPERATION, *ASSESSING ENVIRONMENTAL EFFECTS OF THE NORTH AMERICAN FREE TRADE AGREEMENT (NAFTA): AN ANALYTICAL FRAMEWORK AND ISSUE STUDIES* (1999). Making the task more difficult is an unquantifiable degree of synergy or reflexivity in the economic variables. For example, suppose a study could establish that NAFTA, by itself, augmented foreign direct investment flows into Mexico by X percent in 2003. The “extra” foreign investments represented by X will have consequences for production and employment and other macroeconomic variables, some of which may show up in 2005 or 2006. The changes in those variables may, in turn, influence investors in 2007 or 2008 to increase (or decrease) their level of investment, or they may influence changes in government budgets and government policies in 2009. These matters would ordinarily be considered exogenous economic

In broad terms, the economic effects directly attributable to NAFTA are (a) changes in trade flows within North America, (b) changes in investment flows within North America, (c) changes in transportation related to the movement of the goods in trade, and (d) the diversion of some trade with non-NAFTA trading partners to North America. These are the changes measured by the gross data for trade and investment cited above. What affects peoples lives, though, are changes in national and local economic conditions arising from the increased trade and investment. These changes are somewhat less direct but probably still traceable to NAFTA to some degree. In understanding NAFTA neoliberal stories and counterstories, prominent among those indirect economic effects are distributional changes such as (a) economic losses to some sectors versus economic gains to others, (b) variations in economic development across different regions within a country, and (c) increasing urbanization or migration. Analysts do not agree about the distributional effects of NAFTA within Mexico, particularly as between the border area and other parts of the country. Enrique Dussel, commenting on the "lack of an endogenous Mexican manufacturing sector" within the "transformed . . . Mexican economy," sees an emerging polarization between the export-oriented sector of the economy and "most of Mexican society, where 40 percent of the population lives below the poverty line, [that] has not been incorporated into this process."<sup>39</sup> Economist John Mutti documents a different distributional shift, in which the northern border states of Mexico show greater income equality since NAFTA, while the impoverished southern Mexican states show a decline in income equality.<sup>40</sup> Jorge Bustamante, a sociologist who has worked in and studied the border area for many years, has a different perspective altogether. For him, because "the Mexican side of the border, especially Baja California, has lived under NAFTA-like conditions for decades[,] . . . NAFTA will have a much greater impact on the interior than on the border regions of Mexico."<sup>41</sup>

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variables. In short, it may be possible to say something about NAFTA's investment effects on employment or production, but it would be speculation to say anything specific about the effects of those changes on subsequent investment flows. Moreover, variables like political instability and corruption cloud any investment decisions. These potential risks are probably affected by NAFTA—the U.S. negotiators of NAFTA certainly hoped so—but in ways that are beyond quantitative measurement. See EXECUTIVE OFFICE OF THE PRESIDENT, *THE NAFTA EXPANDING U.S. EXPORTS, JOBS, AND GROWTH: CLINTON ADMINISTRATION STATEMENT ON THE NORTH AMERICAN FREE TRADE AGREEMENT* (Nov. 1993).

39. Enrique Dussel Peters, *Effects of Export-Led Growth on the Structure of Mexican Industrial Production*, in *U.S.-MEXICAN ECONOMIC INTEGRATION: NAFTA AT THE GRASSROOTS* 25, 35 (John Bailey ed., 2001).

40. JOHN MUTTI, *NAFTA: THE ECONOMIC CONSEQUENCES FOR MEXICO AND THE UNITED STATES* 78 (2001).

41. Jorge A. Bustamante, *The Mexico-U.S. Border: A Line of Paradox*, in *IDENTITIES IN NORTH AMERICA: THE SEARCH FOR COMMUNITY* 180, 192 (Robert L. Earle & John D. Wirth eds., 1995). Yet, Bustamante also worries that "NAFTA and related process [will] lead not to MexiAmerica, but to three

NAFTA is presumably also having some qualitative effect on other economic factors, especially physical and social capital. For example, NAFTA has probably intensified the development of communications networks, prompted additional investment in transportation facilities and services, and even led to some increase in such factors as business and tourist travel within North America. More speculative are possible tertiary effects on individual and organizational behavior, through greater cultural interaction and NAFTA-stimulated changes in social and political circumstances. This includes evolving attitudes in business, civil society, and public affairs, that can lead to further changes in public policy regarding trade sensitive areas such as trade policy, environmental protection, and immigration.<sup>42</sup> The further we proceed down this chain of potential causal connections, the more attenuated NAFTA's effects become and the more likely it is that other socioeconomic factors might be driving the observed changes. Indeed, some matters of behavior or policy may be immune to NAFTA's effects because they constitute the core values or principles of the particular nation or social sector.<sup>43</sup>

When it comes to secondary effects like environmental changes, the methodological problems in identifying NAFTA's precise effects multiply. The North American Commission for Environmental Cooperation (CEC), tasked by the NAFTA governments to evaluate NAFTA's environmental effects, spent more than two years studying the question of what methodology could or should be employed in such studies. Ultimately, it decided that there was no simple or single correct approach to such studies and offered instead a more generic "analytical framework."<sup>44</sup> From the first round of studies applying this analytical framework, several conclusions stand out. One is that "environmental assessments of free trade are complex, and remain more or less in their infancy."<sup>45</sup> Another is that, "[b]road-scale or 'macro' studies . . . suggest, in general, that the environmental effects of free trade have been marginal at best."<sup>46</sup> But

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Mexicos: a prospering Northern Mexico, a Plateau Mexico, with its ponderous administrative core, and an impoverished Central American Mexico." *Id.* at 193.

42. The North American Institute in Santa Fe, New Mexico (a trinational nonprofit group dedicated to improved understanding within North America) has devoted much of its effort to exploring these tertiary dimensions. See, e.g., *TRANS-BORDER CITIZENS: NETWORKS AND NEW INSTITUTIONS IN NORTH AMERICA* (Rodney Dobell & Michael Neufeld eds., 1994); Bustamante, *supra* note 41.

43. This is certainly Bustamante's view. See Bustamante, *supra* note 41, at 185–87. He finds a strong identification with Mexico and Mexican values among border area residents despite frequent interaction with American people and culture and the colloquial use of English words and phrases.

44. COMM'N FOR ENVIRONMENTAL COOPERATION OF N. AM., *ASSESSING ENVIRONMENTAL EFFECTS OF THE NORTH AMERICAN FREE TRADE AGREEMENT: AN ANALYTICAL FRAMEWORK (PHASE II) AND ISSUE STUDIES* (1999), available at [http://www.cec.org/files/pdf/ECONOMY/engframe\\_EN.pdf](http://www.cec.org/files/pdf/ECONOMY/engframe_EN.pdf) (last visited Sept. 8, 2003).

45. *THE PICTURE BECOMES CLEARER*, *supra* note 37, at 25.

46. *Id.*

“environmental impacts become more significant when disaggregated and measured by economic sector, environmental medium, or geographic location.”<sup>47</sup> Studies specific to location or sector are hampered by inadequacies of trade data, and even more by the “lack of availability of targeted local, regional or sector-based environmental data necessary to draw correlations between economic and environmental change.”<sup>48</sup> Many studies provide data on specific environmental changes that have occurred since NAFTA came into force, but most of them reach only cautious or tentative conclusions about NAFTA’s effects.<sup>49</sup>

Keeping in mind the substantial limitations on interpretation of the data, the analytical approach in Parts II and III is based on certain broad premises. First, even with respect to direct economic effects, it is important to keep in mind that NAFTA did not arise in a vacuum, but is instead merely one thread in a much larger economic tapestry. In all three countries, and especially in the United States, the domestic economy is more important than trade with NAFTA partners.<sup>50</sup> The three economies are also subject to changes in global economic conditions, both the expected (such as China’s entry into the WTO) and the unpredictable (like the fluctuations in world oil prices spurred by domestic turmoil in Venezuela and Nigeria and by conflict in Iraq in 2003).

The uncertain, contestable nature of NAFTA’s relationship to and interaction with these other macroeconomic variables becomes a central issue in the effort to distinguish the real NAFTA from the symbolic NAFTA. As seen in the NAFTA counterstories related by Kingsolver or similar stories disseminated in popular journals or the reports of nongovernmental organizations, the symbolic NAFTA represents the ambivalent relationship of individuals to the process of

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47. *Id.* at 3.

48. *Id.* at 26.

49. A good example is Kevin P. Gallagher, *Industrial Pollution in Mexico: Did the NAFTA Matter?*, in GREENING THE AMERICAS: NAFTA’S LESSONS FOR HEMISPHERIC TRADE 119 (Carolyn L. Deere & Daniel C. Esty eds., 2002). Gallagher finds, on the one hand, “that significant improvements in industrial air pollution have occurred in some Mexican industries, but not to the extent that they are triggering a reduction in overall levels of industrial air pollution in Mexico.” *Id.* at 125. On the other hand, “most industries in Mexico are alarmingly ‘dirtier’ than their US counterparts” because of “the lack of end-of-pipe technologies rather than the age of the plants.” *Id.* at 133–34. Gallagher’s overall conclusion mimics the policy pronouncements of the governments before NAFTA, and the conclusions of this Article: “[W]here certain conditions prevail, environmental improvements can be achieved through creative management of the liberalization process. Where these conditions are absent, environmental degradation is likely to dominate. Left to its own devices, unbridled economic integration can have disastrous environmental results.” *Id.* at 136.

50. For the United States, total exports remain less than 20 percent of Gross Domestic Product. The comparable figure for Mexico is 30 percent. Rogelio Ramirez de la O, *United States-Mexico Economic Convergence*, 10 U.S.-MEX. L.J. 23, 24 (2002).

globalization. Without attempting a complete theory of globalization,<sup>51</sup> it is widely understood to have at its core the increasing economic interrelationships among the nations of the world.<sup>52</sup> Interrelationships have their positive side, such as increased communication and social participation.<sup>53</sup> Another form of interrelationship, however, is interdependence in the sense of diminished self-reliant autonomy, leading in turn to social apprehension that the interests of distant, foreign economic actors are assuming undue importance compared to national or local considerations.<sup>54</sup>

The same factors that are driving economic integration are also bringing about decentralized modes of production. In the two decades preceding NAFTA, the rapidly increasing facility of international transportation, communication, and information sharing, including the emergence of the 24-hour world market in securities, led to structural changes in investment and production featuring flexibility and coordinated timing. Contrasted with the economies of scale and fixed facilities focus associated with Henry Ford's assembly line production, this was termed by some a "post-Fordist" model.<sup>55</sup> This new business model is exemplified by "just-in-time" inventory management. It depends on close links between suppliers and producers, and places a premium on location for maximally efficient production at different stages of "global commodity chains."<sup>56</sup> The post-Fordist model leads businesses to be more active and aggressive in international business transactions and investments, and to coalesce production in specialized subregions (some of which can be transboundary), such as the automotive industry

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51. See GILPIN, *supra* note 29; DANI RODRICK, HAS GLOBALIZATION GONE TOO FAR? (1997). Less academic accounts abound. E.g., THOMAS L. FRIEDMAN, THE LEXUS AND THE OLIVE TREE (2000).

52. For a similar approach to the issue, see COREY L. LOFDAHL, ENVIRONMENTAL IMPACTS OF GLOBALIZATION AND TRADE: A SYSTEMS STUDY 5 (2002) ("The term *globalization* itself is defined variously, its scope growing and contracting according to the needs of the moment, but fundamentally the term implies increased linkages across national boundaries, expansion of the international market economy, and a complex and integrated world society.").

53. For an interesting effort to analyze and measure each nation's globalization through a multifactor index that includes not only trade and investment flows but also international travel, international telephone calls, Internet connectivity, and government participation in international organizations, see *Measuring Globalization, Who's Up, Who's Down?*, *supra* note 29, at 60. In the 2002 index, Ireland ranks first in the world, the United States 11th, and Mexico 49th (behind Panama [30th], Chile [31st], and Argentina [48th] among the Latin American nations). *Id.* at 65.

54. Pat Buchanan gives voice to such anxieties. See, e.g., Trouble in the Neighborhood, Address to the San Diego World Affairs Council (Sept. 8, 2000), available at <http://www.buchanan.org/pa-00-0428-troublesintheneighborhood.html>.

55. See MIGUEL ÁNGEL VALVERDE, COPING WITH U.S.-MEXICAN INTERDEPENDENCE: THE NAFTA RESPONSE (Monograph No. 36, Centro de Investigación y Docencia Económicas, 1999) at 15-16.

56. Dussel Peters, *supra* note 39, at 36; see also GILPIN, *supra* note 29, at 292-94 (discussing the regionalization of services and manufacturing).

complex spanning Ontario and parts of the U.S. Midwest.<sup>57</sup> The combination of international interdependence and national decentralization diminishes economic control and the political authority of the center, allowing localities and regions to exercise greater influence. Positive as such changes can be, they also increase apprehension about loss of control, and about the unchecked influence of outside business or other foreign actors.

In sum, the economic and political changes conveyed by the term "globalization" create a sociopolitical situation that many people find unpredictable and insecure. A lost sense of comfort or certainty itself becomes a sufficient reason for people to resist trends viewed as at the root of these changes. In the context of globalization, then, there is bound to be a disconnect between the objective effects of the real NAFTA and the subjective responses to NAFTA as a symbol. Economically, trade policy can be adapted to national economic policies and changing world conditions. The effects of trade of greatest symbolic concern, however—amorphous issues such as autonomy, justice, and quality of life—are most influenced by conditions and factors beyond the control of trade policy.

Finally, many have commented that NAFTA seeks to integrate three highly asymmetric economies. The power of the U.S. economy dwarfs Canada's and Mexico's combined. Moreover, enormous disparities in per capita wealth and average personal welfare exist between Mexico and its northern trading partners, which bear directly on the relationship between the real and the symbolic NAFTA in the border area. Economic asymmetry means that Mexico's response to the economic opportunities of NAFTA was bound to be fundamentally different from the response of the United States, yet residents of the border area (who have frequent, often daily, interactions across the border) inevitably compare conditions on the two sides of the border and question the differences.<sup>58</sup> It is those differences, the attitudes of people about those differences, and the expectations of economic development and equitable distribution that they create, that contribute significantly to the negative perception of NAFTA as a symbol of what is wrong, rather than what is right, about conditions in the border region.

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57. Dussel Peters, *supra* note 39, at 37–38; see also TORRES GUERRERO, *supra* note 15, at 72–73 (observing a clustering of the textile and clothing industry in Mexico in general and Aguascalientes in particular).

58. Bustamante, *supra* note 41, at 188: "[Mexican border people] learn through experience to view Americans as symbols of inequality and asymmetrical power relationships . . . Mexican *fronterizos* don't like this asymmetry, and they fight against it through the conventional channels of competition."

## B. NAFTA in Historical Context

Mexico's President Salinas launched the negotiation of NAFTA as a government response to the global forces of decentralized production and economic integration.<sup>59</sup> NAFTA was the culmination and institutionalization of a decade or more of economic policy reform in Mexico,<sup>60</sup> which had already shifted it from a protected import substitution economy into a more dynamic, less predictable export-oriented market economy.<sup>61</sup> This was as true for agriculture as it was for industry.<sup>62</sup> Mexico's entry into the General Agreement on Tariffs and Trade (GATT) in 1986, scarcely remarked at the time, was an important step in this economic policy change and a critical predicate to NAFTA.<sup>63</sup>

The U.S. government, in agreeing to Salinas's proposal to negotiate NAFTA, was also reacting to, rather than driving, these economic changes. For the George H.W. Bush administration, NAFTA was the next logical step in an established trade policy that included the opening of the Uruguay Round of international trade negotiations in 1986 and the conclusion of the

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59. VALVERDE, *supra* note 55, at 19, comments that after a trip to Europe in 1990, President Salinas "decided that Mexico should take the initiative and formally join a bloc with the U.S." which "led [the Mexican government] to launch a major lobbying campaign in the United States in favor of NAFTA."

60. *Id.* (analyzing patterns of economic interdependence in the Mexican economy that developed progressively since World War II, leading to the "NAFTA Response").

61. Because there is a tendency to romanticize the economic growth and stability of Mexico during the decades after World War II, it is useful to remember that the economic policy reforms preceding NAFTA were prompted by unsustainable patterns of reliance on imported foods and materials in Mexico's import substitution model of development. Mexico was able to compensate for those imbalances with oil revenues and later with borrowing, but Mexico's 1982 default on its foreign debt finally revealed the fundamental problems with previous macroeconomic policies. See Dussel Peters, *supra* note 39, at 26-29.

62. Kimberly Beecham, U.S. Influence on Mexican Agriculture: Three States and Interdependence 29-58 (2001) (unpublished Masters thesis, University of Missouri-Columbia). Beecham details a history of agricultural reform in Mexico beginning with Green Revolution initiatives introducing irrigated agriculture, livestock raising, and hybrid varieties of corn and other crops as early as the 1940s and continuing through the 1960s. This and other government policies led to a decrease in the proportion of the population engaged in agriculture from 70 percent in 1930 to 30 percent in 1980. By the 1970s, moreover, population growth was outstripping the productivity capacity of Mexican agriculture, leading to a dependence on imports from the United States to maintain the food supply. The value of the agricultural trade between the two countries more than doubled between 1982 and the early 1990s. In another domestic policy change with enormous influence on rural areas, in 1992 the Salinas Administration removed restrictions on rural land tenure through the amendment of Article 27 of the Constitution. SIMON, *supra* note 13, at 214, gives a similar assessment. Simon notes that Mexican peasant corn farmers were "one of the most inefficient and subsidized sectors of the Mexican economy," and that the end of the subsidies in the early 1990s "exposed the long-term environmental problems in the Mexican countryside." *Id.*

63. José Agustín Portal contributes an interesting insight into Mexico's process of adapting to the world of international trade in his discussion of Mexico's reformations of its systems for adopting technical standards for various products. José Agustín Portal, *Mexican Standards Related Policy and Regulation*, 9 U.S.-MEX. L.J. 7 (2001). Licenciado Portal was the lead Mexican negotiator for the standards chapter (Chapter 9) of NAFTA.



Canada–United States Free Trade Agreement<sup>64</sup> in 1988. To be sure, the governments were not passive players in this process. NAFTA goes to some lengths to turn the market forces of decentralized, regionalized production to mutual national advantage through carefully structured rules of origin for critical sectors.<sup>65</sup> Even those provisions, however, have steered rather than driven trade and investment flows within North America.

Notwithstanding changes in production and investment patterns and the steady progression of economic policy through the 1980s, the negotiation of NAFTA was the catalyst for the first serious public discussion of the economic and political implications of globalization. Particularly in the U.S.-Mexican border area, the negotiation of NAFTA coincided with a new awareness of increasingly acute regional problems, including everything from drug smuggling and illegal immigration to rampant development and deteriorating environmental quality. The San Diego–Tijuana area nearly doubled in population between 1970 and 1990, for example, and the El Paso–Ciudad Juárez metropolitan area had similar growth.<sup>66</sup> The environmental studies prepared by the U.S. government in the early stages of the NAFTA negotiations, and again after the agreement was concluded, document serious environmental stresses along the entire border from pre-NAFTA development.<sup>67</sup> NAFTA became the lens that focused both countries' attention on these pre-existing patterns of economic and population growth accompanied by environmental degradation.

The coincidence of NAFTA implementation in 1994 with the accumulation of adverse consequences arising from decades of cross-border exchanges of goods, people, and pollution leads to the common but fundamentally mistaken assumption that NAFTA caused these effects. One NAFTA counterstory, for example, attributes the heavy metals soil pollution threatening Colonia Chilpancingo in Tijuana to a company "operating under the auspice[s] of the North American Free Trade Agreement."<sup>68</sup> In fact, the contamination is the result of a poorly operated lead smelting and recovery company, Metales y Derivados. Owned by two Americans, it began operations in 1972, relocated to

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64. Canada–United States: Free Trade Agreement, March 1988, 27 I.L.M. 281.

65. Thus, for example, the United States recognized the comparative advantage that Mexico had in clothing assembly and some textile manufacture and processing, but sought to retain markets for other aspects of the U.S. textile industry through the "yarn-forward" rules of origin, which inhibit the use of Asian or other yarns and fabrics in Mexican clothing assembly for the U.S. market.

66. The combined population of San Diego and Tijuana grew from 1.7 million in 1970 to 3.25 million in 1990. Ganster, *supra* note 16, at 35, 38.

67. EXECUTIVE OFFICE OF THE PRESIDENT, THE NAFTA: REPORT ON ENVIRONMENTAL ISSUES 100–153 (1993) (summarizing the conditions in the border area and recapitulating the main findings of the USTR 1992 "Review of U.S.-Mexico Environmental Issues"), available at <http://www.ustr.gov/environment/nafta93report.pdf>.

68. See *supra* note 12 and accompanying text.

the site in question in 1986, and was shut down by order of the Mexican environmental authorities in 1994, only months after NAFTA came into force.<sup>69</sup> Thus, it is the closure of Metales y Derivados, not its operation, that should be attributed to NAFTA and its penumbra of public attention to such issues. Unfortunately, the contamination has not yet been remediated. The responsible company and its American owners (who were criminally convicted and fined in California in 1992 for illegal transport of hazardous waste) are under indictment in Mexico but are not extraditable and have no assets in Mexico with which to finance a clean-up.<sup>70</sup> But that has nothing to do with NAFTA. If anything, the system for citizen submissions to the CEC has allowed local citizens to keep the need for clean-up in the public eye, and on the agenda of the Mexican authorities.<sup>71</sup>

The conviction that NAFTA has brought problems to the border area endures because, as Kingsolver acutely observed, NAFTA's inaccessibility contributes to its symbolic power.<sup>72</sup> Not knowing or understanding the real NAFTA, people attribute changes in their lives to NAFTA, which might actually have been caused by changes in economic conditions or in unrelated domestic policies. There is a related problem of ignorance: Many people do not know that the civic debate over NAFTA actually prompted the United States and Mexico to embark on new cooperative programs to alleviate environmental stresses even before NAFTA was concluded,<sup>73</sup> and

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69. COMM'N FOR ENVTL. COOPERATION, METALES Y DERIVADOS, FINAL FACTUAL RECORD (SEM-98-007), July 2, 2002, at 20–22 [hereinafter FINAL FACTUAL RECORD], available at <http://www.cec.org/files/pdf/sem/98-7-FFR-e.pdf>.

70. *Id.* at 13–16; Kevin Sullivan, *A Toxic Legacy on the Mexican Border*, WASH. POST, Feb. 16, 2003, at A17.

71. In 1998, the Environmental Health Coalition of Tijuana and other citizen organizations sought an investigation by the CEC Secretariat, which, after approval of the three environmental ministers, prepared a factual record that was released to the public in 2002. See FINAL FACTUAL RECORD, *supra* note 69, at 9–10.

72. "NAFTA was described as being something alive to wield power, to make decisions, to bring either salvation or doom to families and communities. Such imagination of this tremendous entity was facilitated by the document itself being largely unavailable to readers in the United States and Mexico." KINGSOLVER, *supra* note 6, at 15. Kingsolver continues:

Since the document itself was largely unavailable, the stories told about its contents and possible consequences mattered all the more, and one's view of NAFTA was likely to indicate other forms of allegiance as informed through particular sources. The sources, of course, were often in direct conflict about the contents and implications of the Agreement, and because readers or listeners (and perhaps those making the argument themselves) were not directly consulting the document, the charisma of stories and speakers was in full play.

*Id.* at 19.

73. In early 1992, the two governments developed the Integrated Border Environmental Plan for the U.S.-Mexico Border Area, refashioned in 1996 under the title *U.S.-Mexico Border XXI Program*. U.S. ENVTL. PROTECTION AGENCY & MEXICAN SECRETARIAT OF ENVIRONMENT, NATURAL RESOURCES,

that it ultimately led to the creation of new international environmental institutions—the Border Environment Cooperation Commission<sup>74</sup> and the CEC.<sup>75</sup> These institutions provide new and additional avenues for research, discussion, and program development intended to address environmental problems such as the lead pollution in Tijuana. Indeed, cooperation between the two governments on border environmental questions, which has deep historical roots, stepped up significantly in the 1980s with the conclusion and implementation of the 1983 La Paz Agreement.<sup>76</sup> Through that agreement, some of the most egregious environmental problems in the border area have been substantially mitigated. Air quality in El Paso–Ciudad Juárez has improved due to collaborative cross-border pollution abatement under the auspices of Annex VI to the La Paz Agreement.<sup>77</sup> More dramatically, the notorious pollution of three copper smelters in Arizona and Sonora was substantially reduced through Annex IV.<sup>78</sup> These stories of environmental improvement on the border, though, do not have the same popular currency as the counterstories of persisting poverty, violence, and environmental degradation in the border's urban areas.

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AND FISHERIES, THE U.S.-MEXICO BORDER XXI PROGRAM: PROGRESS REPORT 1996–2000 (2000). The program is being refashioned and retitled once again by the new administrations in Mexico and the United States. EPA, U.S.-MEXICO ENVIRONMENTAL PROGRAM: BORDER 2012, Sept. 20, 2002. The history of border plans is recounted authoritatively in Alan D. Hecht et al., *Sustainable Development of Border Plans on the U.S.-Mexican Border: Past Lessons, Present Efforts, Future Possibilities*, in SUSTAINABLE DEVELOPMENT, *supra* note 14, at 15 (Mr. Hecht is a former deputy administrator of the EPA).

74. Agreement for the Establishment of a Border Environment Cooperation Commission and a North American Development Bank, Nov. 18, 1993, U.S.-Mex, 32 I.L.M. 1545 (1993). For an overview, see Sanford E. Gaines, *Building Cross-Border Institutions for Environmental Improvement in the U.S.-Mexico Border Area*, 12 ARIZ. J. INT'L & COMP. L. 429 (1995).

75. An excellent early account of the CEC situates its genesis in the politics surrounding NAFTA negotiation and approval. PIERRE MARC JOHNSON & ANDRÉ BEAULIEU, *THE ENVIRONMENT AND NAFTA: UNDERSTANDING AND IMPLEMENTING THE NEW CONTINENTAL LAW* (1996). For evaluations of the CEC's performance, see GREENING THE NAFTA: THE EXPERIENCE AND POTENTIAL OF THE NORTH AMERICAN COMMISSION FOR ENVIRONMENTAL COOPERATION (John L. Knox & David B. Markell eds., 2003).

76. "[I]t may well be that La Paz will come to be seen as a key turning point in Mexican-U.S. relations that, in taking on the environment, now played out along a broader bandwidth than the already existing close economic and financial relationships." JOHN D. WIRTH, *SMELTER SMOKE IN NORTH AMERICA: THE POLITICS OF TRANSBORDER POLLUTION* 206 (2000); Agreement on Cooperation for the Protection and Improvement of the Environment in the Border Area, Aug. 14, 1983, U.S.-Mex, 22 I.L.M. 1025 (1983).

77. Peter M. Emerson et al., *Managing Air Quality in the Paso del Norte Region*, in ENVIRONMENTAL MANAGEMENT ON NORTH AMERICA'S BORDERS 125 (Richard Kiy & John D. Wirth eds., 1998).

78. WIRTH, *supra* note 76, at 175–99, recounts the story in vivid detail.

## II. MAQUILADORAS: PRE-NAFTA POLICIES SHAPE NAFTA AS A SYMBOL

NAFTA and *maquiladoras* were closely associated in the public discourse that preceded the Agreement,<sup>79</sup> and continue to be studied and commented on in neoliberal stories and counterstories since NAFTA came into effect.<sup>80</sup> The continuing association of *maquiladoras* with NAFTA exemplifies how circumstances with long historical roots in the border region have shaped perceptions of NAFTA as a symbol of the region's problems. The symbolic linkage of *maquiladoras* and NAFTA, however, rests on a substantial misunderstanding about what *maquiladoras* are and what effects they have had in Mexico. Ten years into NAFTA, even seasoned observers slip into symbolic NAFTA clichés that reflect these misunderstandings.<sup>81</sup> This part will present a more complex explanation of the economic role of *maquiladoras* as an element of Mexican economic policy. That analysis leads to an identification of policy changes that could help remedy the social and environmental conditions along the border associated with industrial development. I will argue that the major policy deficiencies that allow border problems to persist lie not with NAFTA, but with local and national political patterns endemic to Mexico.

This part will challenge prevalent popular assumptions about *maquiladoras*. The public has a vague sense that *maquiladoras* are foreign-owned assembly and manufacturing facilities producing goods for export, which have proliferated on the Mexican side of the border. That much is largely correct, though NAFTA and corresponding amendments to Mexican law have led to significant changes. During and after World War II, the United States imported Mexican agricultural workers under the Bracero Program; border communities became accustomed to this source of employment and economic development. When the United States phased out the Bracero Program in the early 1960s, Mexico sought a new means to create jobs in Mexico to absorb the displaced Bracero workers. With encouragement and advice from the United States,

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79. "Suddenly, conditions in the Mexican *maquiladoras* . . . became a national concern and a symbol of everything that was wrong with NAFTA." SIMON, *supra* note 13, at 211 (discussing the period of NAFTA negotiations, 1990–1992).

80. "[I]t is the maquiladora industry along the border that has been targeted for substantial and at times ferocious criticism." Leslie Sklair, *Global Capitalism and Sustainable Development: Exploiting the Contradictions*, in SHARED SPACE: RETHINKING THE U.S.-MEXICO BORDER ENVIRONMENT 17, 34 (Lawrence A. Herzog ed., 2000).

81. For example, the following statement appears in a recent article in the *New York Times*: "Then, in the 1990's, came the *maquiladoras*, the assembly line factories providing cheap Mexican labor for American and multinational corporations under the North American Free Trade Agreement." Tim Weiner, *U.S. Will Get Power, and Pollution, From Mexico: 2 Plants Herald Era, Supplying California*, N.Y. TIMES, Sept. 17, 2002, at A3.

Mexico launched a Border Industrialization Program in 1965.<sup>82</sup> A key element of that program was a system of economic incentives to stimulate foreign investment. The "*maquiladora*" form of business organization was established: Qualifying foreign firms would be allowed to import equipment and parts duty-free so long as the finished products were exported. To encourage new businesses to locate in the border region, the *maquiladora* program was originally limited to that region.<sup>83</sup> Over 1500 *maquiladoras* were established in the twenty-five years preceding NAFTA. Most were assembly operations, or subsidiaries of or suppliers of parts and components to major U.S. firms, with increasing Asian and European presence in the later years. General Motors, the automotive parts supplier Delphi, and electronics manufacturers Philips and Sony are typical examples. The Mexican decree governing *maquiladoras*<sup>84</sup> has been substantially amended in the ensuing years,<sup>85</sup> however, and NAFTA itself forced further changes. In particular, the legal restriction on *maquiladora* ownership has been removed, so there are now numerous Mexican-owned *maquiladoras*. And as an explicit result of NAFTA itself (Article 304), the Mexican *maquiladora* decree now makes no distinction between domestic sales and export sales in granting its duty waiver benefits.

Three other assumptions that pervade NAFTA counterstories about environmental degradation in the border area in the last ten years merit closer analysis. First, the notion persists that *maquiladoras* were created, or at least greatly encouraged, by NAFTA. In fact, well over half the current number of *maquiladoras* already existed when NAFTA came into effect in 1994.<sup>86</sup> It is important to understand the factors that led to their establishment, and how NAFTA affected those factors. Second, NAFTA counterstories implicitly assume or create the impression that *maquiladoras* are a phenomenon of the border region. In fact, since NAFTA they can be, and have increasingly been, located almost anywhere in Mexico. Third, the *maquiladoras* are held responsible for the social and environmental ills of the border. The symbolic simplicity of this attribution masks a more complex reality that exculpates NAFTA as the key culprit.

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82. See David A. Gantz, *New Changes for the Maquiladoras: Legal and Policy Implications of NAFTA Article 303 for United States-Mexico Trade*, 30 DENV. J. INT'L L. & POL'Y 1 (2001).

83. *Id.* at 11–12.

84. The basic rules were eventually consolidated in a 1989 decree, "Decreto para el Fomento y Operación de la Industria Maquilado," D.O., 22 de diciembre de 1989.

85. Maquiladora Decree of 24 Dec. 1993, D.O., 24 de diciembre de 1993 (implementing NAFTA by phasing out the export requirement between 1996 and 2000); Decree of 31 Dec. 2000, D.O., 31 diciembre de 2000.

86. TORRES GUERRERO, *supra* note 15, at 78 tbl. 2 (giving numbers of *maquiladoras* in Mexico, in the border states, and in Aguascalientes).

A. The Assumption That *Maquiladoras* Were Promoted by NAFTA

As noted above, NAFTA did not create *maquiladoras*, nor give them specific new benefits. The subtler question is whether NAFTA's trade rules stimulated further expansion of the *maquiladora* sector of the Mexican economy. As part of her argument about how NAFTA's inaccessibility contributes to its symbolic power, Kingsolver comments that the neoliberal stories and counterstories about *maquiladoras* and NAFTA "were often in direct conflict about the contents and implications of the Agreement, and because readers or listeners (and perhaps those making the arguments themselves) were not directly consulting the document, the charisma of stories and speakers was in full play."<sup>87</sup> The counterstory version, exemplified by Ralph Nader, is by now familiar.<sup>88</sup> More interesting to consider is the neoliberal version.

Don Newquist, then a member of the U.S. International Trade Commission, made the following comments in 1992:

Now the maquiladora issue is a red herring because, first of all, maquiladoras already exist. Secondly, they will not be more advantaged under free trade but less so, because under the NAFTA the special advantage of being a free trade zone within a free trade country isn't such a hot deal. The expansion of the maquiladora cities would tend to be diminished, not increased.<sup>89</sup>

The descriptive elements of this statement are correct. *Maquiladoras* did exist before NAFTA, and by making free trade between Mexico and the United States the universal norm, NAFTA eliminated the duty waiver advantage of *maquiladoras*. His "charismatic" prediction though, turned out to be erroneous. The question is whether the accelerated growth of the *maquiladora* sector in the late 1990s was a result of NAFTA, as Nader implied, or occurred (to Newquist's surprise) in spite of the new business circumstances after NAFTA. I will argue that the latter is the case.

Newquist's prediction failed to account for the broader context in which companies are deciding whether to do business in Mexico and whether to organize as *maquiladoras*. First, there are economic advantages to the *maquiladora* form of business organization other than duty waivers on equipment and intermediate goods, including preferential tax arrangements under Mexican law that are independent of NAFTA. The continued attractiveness

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87. KINGSOLVER, *supra* note 6, at 19.

88. "Want a small-scale preview of the post-GATT and NAFTA free trade world? Check out the U.S.-Mexico border region, where hundreds of U.S. companies have opened up shop during the last two decades in a special free trade zone made up of factories known as *maquiladoras*." *Id.* at 19-20 (quoting a 1993 statement by Ralph Nader).

89. *Id.* at 19 (quoting Ralph Nader).

of the *maquiladora* model depends in part on Mexico's response to changing conditions in the post-NAFTA period.<sup>90</sup> Second, Mexico's national economic liberalization policies, of which NAFTA is a part, are reinforced by other free trade agreements, and by the global tariff reductions concluded a year after NAFTA in the Uruguay Round under the GATT. These tariff reductions, along with geographic proximity and low labor costs, make Mexico an attractive platform for Asian, European, and North American producers making consumer goods like televisions and computers destined for the U.S. market.<sup>91</sup> Even the clothing and automotive sectors, subject to elaborate NAFTA rules of origin intended to maintain the advantage of U.S. and Canadian textile, automobile, and auto part manufacturers vis-à-vis suppliers from the rest of the world,<sup>92</sup> leave ample competitive space for Asian and European producers.<sup>93</sup> All of these factors led to a sharp increase in foreign direct investment flows to Mexico after NAFTA, nearly doubling the number of *maquiladora* plants from 2114 in 1993 to 3729 in 2001.<sup>94</sup>

The explosive growth of *maquiladoras* in the late 1990s would seem to refute Newquist's claim that *maquiladoras* would be less advantaged under NAFTA. But the analysis of the contest between the neoliberal story and the counterstory on *maquiladoras* should not end with these aggregate numbers. More detailed data tend to substantiate, not contradict, Newquist's claim that *maquiladoras* are disadvantaged under NAFTA. In 1995, the interior state of Aguascalientes had sixty firms that exported products, twenty-nine of which were *maquiladoras*.<sup>95</sup> In 2001, the number of exporters had increased five-fold to 300, while the number of *maquiladoras* increased three-fold to ninety three. This means that under the NAFTA regime, fewer than one-third of the exporting facilities are now organized as *maquiladoras*.<sup>96</sup> This shift suggests that the market opportunity to export from Mexico is driving business growth, not the *maquiladora* form

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90. TORRES GUERRERO, *supra* note 15, at 68–69.

91. Diane Lindquist, *Rules Change for Maquiladoras*, INDUSTRY WEEK, Jan. 15, 2001 commenting that the Asian manufacturers in Baja California made the region “a consumer-electronics production center”), at <http://www.industryweek.com/CurrentArticles/asp/articles.asp?ArticleID=968> (last visited Sept. 8, 2003).

92. See NAFTA, Art. 401, Annex 401, ch. 62 (textiles), and Art. 403(5)(a) and Annex 403.1 (autos).

93. Nissan made a major investment in Aguascalientes as early as the 1980s. Since NAFTA, Aguascalientes has seen rapid growth in textiles and apparel investments, including investments from France, Brazil, Switzerland, Spain, and Hong Kong, as well as the United States. TORRES GUERRERO, *supra* note 15, at 75–76.

94. The U.S. government gives a figure of 4760 *maquiladoras* as of December 2002. See <http://www.itds.treas.gov/maquiladora.html> (last visited July 30, 2003.) The foreign direct investment flows to Mexico reached an average of more than \$11 billion per year after NAFTA. NAFTA AT EIGHT, *supra* note 31, at 2.

95. TORRES GUERRERO, *supra* note 15, at 76–77.

96. *Id.*

of organization. That suggests, in turn, the need to examine more closely the general economic climate and economic policy conditions at work, beyond the specific changes in rules instituted under NAFTA.

U.S. and world macroeconomic conditions exert a strong non-NAFTA influence on the level of *maquiladora* investment in Mexico. The runaway growth, environmental contamination, and miserable living conditions in the border areas recounted in NAFTA counterstories are symptoms of what we now know to have been an extraordinary "bubble" in macroeconomic conditions prevailing in the United States. Businesses supplying the nonstop U.S. economy were eager for export platforms, and Mexico was an attractive location for many of them. But the picture of NAFTA's effects on trade and social and environmental conditions has become considerably more complex since 2000. When the U.S. recession was followed by slow growth, the U.S. market that had previously consumed 85 percent of Mexico's exports shrank, inducing a recessionary economy and dwindling tax base in Mexico.<sup>97</sup> Employment in *maquiladora* plants, which soared in the 1990s, declined sharply in 2001 and 2002.<sup>98</sup> Simple assembly, in which Mexico had a tremendous advantage for some years because of low labor costs and its proximity to the U.S. market, has now begun to move to other countries, like China, where labor costs are even lower.<sup>99</sup> Only some of that movement has been offset by growth in services *maquiladoras*, which now do more than \$1 billion in trade with foreign firms.<sup>100</sup> How much manufacturing growth there will continue to be in Mexico, and in the border area in particular, is now uncertain. In the short-term, of course, rising unemployment and a shrinking tax base in Mexico will aggravate the inferior conditions of housing, roads, schools, and crime in the border region. For tellers of NAFTA counterstories, a new and uncomfortable question arises: If the rapid increase in border area manufacturing before 2000 is seen as the root of the region's social and environmental problems, should the current *maquiladora* recession be seen as a blessing?

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97. See Hale E. Sheppard, *Salvaging Trade, Economic and Political Relations With Mexico in the Aftermath of the Terrorist Attacks: A Call for Reevaluation of U.S. Law and Policy*, 20 B.U. INT'L L.J. 33, 55-61 (2000) (discussing declining investment and trade in recent years).

98. Joel Millman, *Mexican Workers Along U.S. Border Grow Restive With Low Wages*, WALL ST. J., June 13, 2001, at A17; Gori, *supra* note 15 (reporting a 20 percent drop in *maquiladora* employment from October 2000 to March 2002).

99. Froma Harrop, *Up the Wage Chain to Prosperity*, PROVIDENCE J.-BULL., Nov. 6, 2002, at B7 (noting shifts of some production to China and other Asian countries); Elisabeth Malkin, *Manufacturing Jobs Are Exiting Mexico: Business Leaders Try to Stop the Exodus of Factories to China*, N.Y. TIMES, Nov. 5, 2002, at W1 (noting that dollar wages in China are less than half of those in Mexico).

100. Joel Millman, *First Came Assembly; Now, Services Soar*, WALL ST. J., Feb. 28, 2000, at A1.



B. The Assumption That *Maquiladoras* Are Concentrated on the Border Under NAFTA

A second assumption underlying the belief that NAFTA caused the problems of the border is that *maquiladoras* established after NAFTA are a phenomenon of the border region. When Mexico established the Maquiladora Export Program in 1965 to replace the Bracero Program as a stimulus for employment, the *maquiladora* business model and its associated tax and tariff benefits were purposely limited to a twenty-kilometer wide border region. Mexico removed that geographic restriction long before NAFTA was negotiated.<sup>101</sup> Nevertheless, more than 87 percent of *maquiladoras* were located in the Mexican border states when NAFTA came into force. What has happened since then? Studies clearly illustrate that economic conditions beyond NAFTA's free trade rules have a more important bearing on businesses engaged in international trade than does NAFTA itself.<sup>102</sup>

The Clinton Administration's environmental report accompanying NAFTA when it was submitted to Congress in October 1993 claimed that NAFTA would help mitigate the environmental stresses in the border region by encouraging new export businesses in Mexico to locate away from the border.<sup>103</sup> Public Citizen's strong early critique of NAFTA and the border region took specific issue with that claim.<sup>104</sup> Citing figures showing a sharp increase in *maquiladora* operations in the first two years of NAFTA implementation,<sup>105</sup> Public Citizen claimed that NAFTA had "broken promises" and "betrayed" the border region. This criticism was off the mark in two respects. First, a fair reading of the environmental report shows that it clearly predicted further industrial development in the border region.<sup>106</sup> More importantly, though, the

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101. Carlos Montalvo Corral, *Structural Determinants of Sustainability in the Maquiladora Industry on Mexico's Northern Border*, in SHARED SPACE, *supra* note 80, at 313, 314-15.

102. See generally INTERNATIONAL TRADE COMM'N, THE IMPACT OF THE NORTH AMERICAN FREE TRADE AGREEMENT ON THE U.S. ECONOMY AND INDUSTRIES: A THREE-YEAR REVIEW 69-72 (Publication 3045, June 1997).

103. "The NAFTA will encourage a wider distribution of industry throughout Mexico." EXECUTIVE OFFICE OF THE PRESIDENT, *supra* note 67, at 74. "The economic changes that will come with the NAFTA . . . [will] disperse industrial development away from the already stressed border area of Mexico." *Id.* at ES-4.

104. PUBLIC CITIZEN, *supra* note 11, at 4-6 (quoting EXECUTIVE OFFICE OF THE PRESIDENT, *supra* note 67).

105. *Id.* at 3-9.

106. "Increased industrial growth near the U.S.-Mexico border . . . could occur with or without NAFTA . . ." EXECUTIVE OFFICE OF THE PRESIDENT, *supra* note 67, at ES-9. "With or without the NAFTA, population growth and economic development are expected to continue in the border region, and such growth and development will have environmental effects." *Id.* at 100. The report even described as "plausible" a scenario in which "the relative weight of the border in Mexican growth is unchanged." *Id.* at 112.

Public Citizen report incorrectly insinuates that the term *maquiladora* means location in the border. Playing on the fact that most *maquiladoras* were then located in the border area, Public Citizen cited Mexican data on the upsurge of new investment in *maquiladoras* in Mexico in 1995 to convey the distinct impression that these new plants were also concentrated in the border area.<sup>107</sup> More detailed information shows the opposite: More than half of the *maquiladora* plants established in 1995 were located *away* from the border, a pattern consistent with the pre-implementation “promises” of the U.S. government.<sup>108</sup> Indeed, data indicate that the number of *maquiladoras* in the border region actually declined in this period.<sup>109</sup> The pattern of NAFTA dispersal of *maquiladoras* has continued, with nearly 40 percent of new *maquiladoras* since 1994 established in nonborder states.<sup>110</sup> Pointing to the increases in nonborder *maquiladoras* beginning in 1987, one commentator remarks, “Thus, in effect, Mexico had initiated a policy of greater regional integration with the U.S. market substantially prior to NAFTA.”<sup>111</sup> Another explanation emphasizes that this integration was part of a deeper economic policy transformation. When Mexico moved from the internal market focus of the import substitution model of development to an export-oriented development model, manufacturing shifted away from the capital area of Mexico City to the border area, followed by a decentralization pattern in which places between Mexico City and the border became more attractive.<sup>112</sup>

The Public Citizen report noted but discounted the most likely explanation for the unexpectedly sharp increase in *maquiladoras* throughout Mexico in the mid-1990s: the major devaluation of the Mexican peso in December 1994.<sup>113</sup> Currency exchange rates are always relevant to international trade flows. The 1994 peso devaluation of approximately 50 percent instantly enhanced the cost advantage of Mexico’s low wages, changing the dollar cost of making goods in Mexico for sale in the United States much more than did NAFTA’s elimination

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107. PUBLIC CITIZEN, *supra* note 11, at 5–7.

108. *What Is a Maquiladora?*, at <http://www.mexicodataonline.com/maquiladora.html> (last visited Sept. 17, 2003) (stating that 273 of 465 *maquiladoras* established in 1995 were located outside the border area).

109. TORRES GUERRERO, *supra* note 15, at 78 (showing a decline in the number of *maquiladoras* in the border region from 1801 in 1994 to 1776 in 1995); David Molina, *Economic Dynamics in the U.S.-Mexican Border Region*, in NAFTA AT THE GRASS ROOTS, *supra* note 22, at 71, 91, 93.

110. TORRES GUERRERO, *supra* note 15, at 78. Of the 1664 additional *maquiladoras* created nationwide during this period, 1060 were in the border area. As a result, the proportion of *maquiladoras* along the border declined from about 87 percent to 77 percent since NAFTA. *Id.* Molina, *supra* note 109, at 91–92.

111. Molina, *supra* note 109, at 91.

112. MUTTI, *supra* note 40, at 77.

113. PUBLIC CITIZEN, *supra* note 11, at 5 (noting merely that the devaluation “made setting up a maquiladora factory even more lucrative”).

of tariffs.<sup>114</sup> The response to the changed terms of competition was immediate, with hundreds of new *maquiladoras* opening in 1995 to capture the benefits of the altered terms of trade.<sup>115</sup> The power of this explanation is confirmed by the reverse pattern that occurred when the value of the peso appreciated from 1999 to 2002, contributing to recent employment declines in the *maquiladora* sector.<sup>116</sup>

Over time, Mexico has made investments to improve the transportation and communications infrastructure in the interior of the country, and the *maquiladora* sector has dispersed, as predicted, to interior locations in Mexico.<sup>117</sup> Guadalajara has become a center for computers and other high tech production.<sup>118</sup> Areas near Mexico City and interior cities like Aguascalientes and Leon have become the preferred locations for textiles and clothing assembly,<sup>119</sup> and Puebla has remained a base of production for Volkswagen. Even a border state like Sonora has taken aggressive steps to attract export-oriented manufacturers to interior cities such as Hermosillo.<sup>120</sup> A related noteworthy trend in Mexican export businesses is a shift from simple assembly operations employing unskilled labor toward complete manufacturing operations that require skilled labor as well as final assembly workers. Ironically for the border region, some of the

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114. Wage costs in dollar terms fell by nearly one-third as a result of the devaluation. *Id.* at 7. This dwarfs tariff reductions, which were on the order of 5–10 percent for most manufactured goods coming into the United States. To be sure, some argued that the abrupt devaluation was linked to NAFTA because Mexico had maintained the value of the peso at artificially high levels to help dampen U.S. opposition to the Agreement, but such a linkage, even if it did exist, was political rather than legal or economic.

115. Clement et al., *supra* note 14, at 58 (noting that a big jump in employment in *maquiladoras* from 1994 to 1998 was “[s]timulated by falling wage rates associated with the peso devaluation in December 1994 and new regulations for the *maquiladora* program as required by NAFTA”).

116. Malkin, *supra* note 99 (noting that currency appreciation drove up costs about 30 percent in U.S. dollar terms).

117. Shirley Leung, *Plants South of the Border Lose Edge to New Rivals*, WALL ST. J. (Cal. ed.), Oct. 6, 1999, at 1 (identifying a new toll highway between Hermosillo and the U.S. border at Nogales as one factor encouraging manufacturers to locate in Hermosillo); Ginger Thompson, *Fallout of U.S. Recession Drifts South Into Mexico; Jobs Are Scarce and the Outlook Becomes Dismal*, N.Y. TIMES, Dec. 26, 2001, at C1 (reporting that the proportion of *maquiladoras* in the border area has shrunk from 90 percent in 1996 to 60 percent in 2001, locating instead in interior states like Puebla and Queretaro); Ginger Thompson, *Mexico Is Attracting a Better Class of Factory in Its South*, N.Y. TIMES, June 29, 2002, at A3 [hereinafter Thompson, *Better Class of Factory*] (reporting on companies doing business in Yucatán, where the number of *maquiladoras* rose from 16 to 131 in the last ten years).

118. Shirley Leung, *Do PC Jobs in Mexico Benefit State?*, WALL ST. J. (Cal. ed.), July 28, 1999, at 2 (reporting that the state of Jalisco has attracted over \$2 billion in investment in the computer industry, which employs 60,000 people).

119. Kimberly Blanton, *The Silver Lining: NAFTA Has Claimed Numerous US Jobs, as Critics Had Warned, but the Treaty Is Giving the US Textile Industry a Chance at Survival*, BOSTON GLOBE, July 1, 2001, at H1.

120. Leung, *supra* note 117 (reporting on an investment in Hermosillo by a Singapore clothing manufacturer).

NAFTA-prompted shifting of production has been from plants on the U.S. side of the border that employed both Mexican and American workers, to plants in the interior of Mexico, leaving both U.S. and Mexican border area workers stranded.<sup>121</sup>

C. The Assumption That *Maquiladoras* Are the Main Cause of Social and Environmental Problems on the Border

An important question, especially for the border area, is whether Mexico has benefited from the new economic arrangements under NAFTA. Here, the symbolic NAFTA comes into play because the new manufacturing and employment in Mexico, which must be counted as a positive factor for Mexican development,<sup>122</sup> has not had a transformative power on economic health, social stability, and environmental protection, which many had anticipated. Consequently, as one commentator observes:

While there is general agreement that the rapid growth of the maquiladora industry has intensified environmental degradation along the border, it would be absurd to lay the blame for all border environmental problems at the doors of the maquiladoras. The roots of many current problems, particularly water contamination, air pollution, and raw sewage, are long-standing. They existed decades before the maquiladoras arrived.<sup>123</sup>

The picture of *maquiladora* activity and *maquiladora* location in Parts II.A. and II.B. above is oversimplified, as any economist or businessman might recognize. Two oversimplifications are the use of gross unemployment data and the focus on wages as a key factor in Mexican competitiveness in world markets. In fact, employment and wages are linked in complex ways. Many anti-NAFTA advocates criticize the very low absolute wage rates in Mexico.<sup>124</sup> As respected Mexican economist Rogelio Ramirez de la O has observed, though, the real test for wages is not the absolute value of the wage

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121. Millman, *supra* note 10.

122. Every year, about 500,000 young Mexicans enter the formal workforce—a workforce growth rate of about 3 percent. In comparison, the creation of more than one million jobs in the *maquiladora* sector for the years 1994–2000 can be seen as a modest contribution to the needed levels of economic development and job creation. Economists' best estimate is that the Mexican economy must grow at 5 percent per year to employ the new entrants to the workforce. LIBRARY OF CONGRESS, MEXICO—A COUNTRY STUDY (1996), available at <http://www.loc.gov/frd/cs/mxtoc.html> (last visited July 30, 2003).

123. Sklair, *supra* note 80, at 33.

124. E.g., Julie Light, *Engendering Change: The Long, Slow Road to Organizing Women Maquiladora Workers*, CORPORATE WATCH, June 26, 1999 (reporting average wages of \$50–\$60 per forty-hour work week), at <http://www.globalpolicy.org/socecon/inequal/maquilad.htm> (last visited July 14, 2003).

but the wage as a function of worker productivity.<sup>125</sup> Thus, Goodyear concluded in 2000 that “their wage costs in Mexico were already higher than in Canada, adjusted for output per worker,” and Kodak moved CD production from Mexico to Taiwan for similar reasons.<sup>126</sup> Other anecdotes reinforce this message, which is often overlooked in the debate over globalized competitiveness. McIlhenny, the producers of Tabasco, closed an operation in Mexico City and expanded production at their home base in Louisiana because quality control and the bottling equipment were superior in Louisiana.<sup>127</sup> Quality Coils, a small New England company, moved its manufacturing to Mexico in the early 1990s and became a NAFTA counterstory, but several years later it returned to Connecticut because of low worker productivity in Mexico.<sup>128</sup>

Many Mexicans, especially those just entering the workforce, have no regular employment. For this reason, *maquiladoras* have had no difficulty attracting enough unskilled workers, often young female migrants from impoverished rural areas, at the low wages they are offering.<sup>129</sup> Even so, there are not enough jobs to go around, and those who have low-wage jobs want better working conditions and higher pay. For many, migration to the United States seems the better option. Again, Ramirez de la O pinpoints the problem: “The surplus labor that we have is very much structural, surplus labor that cannot be employed because they don’t have the education, the training, the supporting social infrastructure. . . . Significant numbers of the unskilled labor pool migrate to the U.S. . . .”<sup>130</sup>

Recognition that the low wages in Mexico are a reflection of low productivity leads to a connection between productivity and Mexico’s high rates of unemployment and migration to the United States. First, Mexican’s low wages are not simply a matter of business decision, but represent a deliberate government strategy.<sup>131</sup> Second, wages cannot simply be increased without some corresponding rise in worker output. If Mexico seeks to finesse the wage problem by encouraging workers to secure wage increases that outstrip the increases in their productivity, the result will be unsustainable wage inflation

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125. Rogelio Ramirez de la O, *United States-Mexico Economic Convergence*, 10 U.S.-MEX. L.J. 23, 25–26 (2002). Ramirez de la O is in eminent company in this regard. GILPIN, *supra* note 29, at 181, argues for the same focus on productivity, citing the work of Paul Krugman.

126. Ramirez de la O, *supra* note 125, at 25.

127. Harrop, *supra* note 99.

128. *Id.*

129. One 1994 report estimates five thousand people per month moving to the border city of Reynosa in search of work, and quotes a company spokesperson as commenting, “[t]here is a large pool of skilled and semi-skilled labor in the area.” Phoebe McKinney & Leslie Gates, *Zenith Electronic’s Mexican Maquiladora Factories*, available at <http://www.zmag.org/zmag/articles/july94gates.htm> (last visited June 3, 2003).

130. Ramirez de la O, *supra* note 125, at 26.

131. Dussel Peters, *supra* note 39, at 29.

that will drive away investment in future job growth.<sup>132</sup> Notwithstanding these factors, studies indicate that foreign-owned firms in Mexico (and other developing countries) pay higher wages on average than national firms.<sup>133</sup>

Unraveling the claim that real wages have declined in Mexico under NAFTA illustrates another complication. To measure Mexican wages in U.S. dollar terms requires an adjustment for the large peso devaluation of 1994 and the general, though smaller, fluctuations in the relative value of the two currencies since then. Even if one looks at Mexican wages in peso terms, however, there is still room for substantial differences in how analysts account for changing circumstances in the Mexican economy over the last ten years, much less in how they link those changes to the effects of NAFTA.<sup>134</sup> I draw no conclusions on this debate, but underscore the central argument of this Article: Understanding the real NAFTA's influence on current conditions requires looking beneath the surface of symbolic NAFTA stories—both the neoliberal stories and the counterstories.

The connection between large pools of unskilled labor and low wages rates for workers with low productivity leads directly back to the dichotomy between the real and the symbolic NAFTA. The real NAFTA has had little effect on Mexico's exports to the United States despite tariff reductions; most U.S. tariffs on manufactured goods were already low.<sup>135</sup> The more important effect was that the real NAFTA created a more secure environment for foreign direct investment in Mexico, leading to an expansion of foreign investment in assembly and manufacturing operations, thereby providing jobs for many Mexicans. Some of these Mexican workers may have obtained their jobs at the expense of U.S. workers, though overall U.S. job losses appear to have been offset by job gains for U.S. suppliers of parts and equipment to Mexican businesses.<sup>136</sup> Most economists believe that wage declines and employment shifts are driven

132. Ramirez de la O, *supra* note 125, at 25, tells of a decision by Volkswagen to postpone a \$1.5 billion investment program for Mexico after it was pressured to accept a 14.7 percent increase in wages and benefits for its Mexican workers.

133. DRUSILLA K. BROWN ET AL., THE EFFECTS OF MULTINATIONAL PRODUCTION ON WAGES AND WORKING CONDITIONS IN DEVELOPING COUNTRIES 41–45 (Nat'l Bur. Econ. Res. Working Paper No. 9669, 2003), at <http://www.nber.org/papers/w9669> (last visited July 25, 2003).

134. For an interesting iterative exchange among experts on the wage question, see *Happily Ever NAFTA?*, FOREIGN POL'Y, Sept.–Oct. 2002, at 58, 58–65 (debate between John Cavanagh and Sarah Anderson on one side and Jaime Serra and J. Enrique Espinosa on the other).

135. Raul Hinojosa-Ojeda et al., The U.S. Employment Impacts of North American Integration After NAFTA: A Partial Equilibrium Approach, Jan. 2000, Executive Summary (concluding that “[t]he lowering of tariffs through NAFTA has not had a significant impact on the growth of Mexican exports to the United States”), <http://naid.spsr.ucla.edu/pubs+news/nafta2000.html> (last visited July 30, 2003).

136. *Id.* The report concludes that U.S. “jobs ‘put at risk’ from imports number about 37,000 per year due to Mexican imports and 57,000 per year due to Canadian imports.” *Id.* An additional 8400 per year may have lost jobs due to the relocation of production to Mexico. *Id.*

primarily by the internal dynamics of each economy, and not by the tariff-free exchanges between them.<sup>137</sup>

However exaggerated and misleading NAFTA counterstories of *maquiladora* growth and environmental decline might be, industrial development in the border region has continued apace since 1994. If the real NAFTA is not the driver of this industrialization, NAFTA nevertheless symbolizes the changes afoot in and between Mexico and the United States. To ameliorate degraded social and environmental conditions along the border, we need a more complete and realistic diagnosis of their causes. Why are industrial facilities continuing to locate in the border region? What benefits and harms do they bring to the region? How can the benefits be retained or augmented while reducing the harms?

Some new export-oriented facilities continue to be built in the border region, but not because of NAFTA benefits. Instead, their border location allows them to take advantage of the shipping and transportation infrastructure on the U.S. side of the border, which eases imports of components or materials and speeds shipment of finished goods to the United States. A border location thus avoids the transport and communications deficiencies existing in the interior. In addition, Mexico has negotiated free trade agreements with other countries in Central and South America.<sup>138</sup> One plant that exemplifies the response to this constellation of changes is a Daewoo television facility in Tijuana that opened around 1997. Part of Daewoo's motivation to locate in North America was the NAFTA rules of origin, which specified that picture tubes larger than 14 inches had to be produced in North America to qualify the television for duty-free treatment.<sup>139</sup> Mexico's proliferating free trade arrangements also meant that televisions made in Mexico could be sold on favorable terms in Chile as well as Chicago or Calgary. But why Tijuana instead of Guadalajara? Tijuana is within easy reach of the port in Long Beach, California, allowing Daewoo to import components from Korea and other Asian sources. Good road and port facilities in California also facilitate shipment

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137. For example, GILPIN, *supra* note 29, at 204, asserts that "[m]ost American economists" dispute the charge that increased trade flows, plant relocations, and immigration are the cause of the relative decline of wages for low-skilled workers, attributing those effects instead to changes in the terms of domestic competition in the United States through computerization and other new technologies.

138. JON E. HEUNEMANN, THE U.S. TRADE RELATIONSHIP WITH MEXICO: WHERE IT HAS BEEN AND WHERE IT SHOULD GO 7 (Ctr. for Strategic & Int'l Studies, Policy Papers on the Americas, Vol. XII, Study 1, 2001), available at [http://csis.org/americas/pubs/pp\\_us\\_trade\\_mexico.pdf](http://csis.org/americas/pubs/pp_us_trade_mexico.pdf).

139. NAFTA, Annex 401, ch. 85.

of finished products to Canada and Latin America, as well as to the United States.<sup>140</sup>

The unrealized expectation that modern factories like Daewoo's would lead to a better life for the Mexican people must be attributed in large part to Mexico's failure to make needed reforms in the legislature, the judiciary, the police, and a failure to invest in education—the social infrastructure of which Ramirez de la O speaks.<sup>141</sup> Vital investments in physical infrastructure to support modern communications and transportation systems have lagged as well.<sup>142</sup> In particular, Mexico's inadequate taxation and public financing system worsen environmental degradation and social inequities in the border region.<sup>143</sup> Moreover, these problems are exacerbated by a drain of financial resources away from the border area to Mexico City through Mexico's federal tax collection and budgeting, which returns to the border only a small fraction of the taxes generated there. As one analysis concludes, "[t]he problems on the Mexican side of the border result primarily from inadequate urban planning, uncertain federal funding, and constraints on municipal budgeting and finance."<sup>144</sup> Even programs intended to correct some of the chronic socio-political inequities in Mexico, such as President Fox's Plan Puebla Panama to bring economic development to deeply impoverished southern Mexico, will perpetuate the shortage of government resources in the border states. Meanwhile, the flood of unskilled labor into the border cities is likely to continue. Traditional government agricultural subsidy programs, such as the very expensive—and often corrupt—system of corn purchases by the government, were phased out as part of the economic restructuring process during the

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140. The Daewoo facility is mentioned by MUTTI, *supra* note 40, at 56–57. Some of the information comes from a facility tour the author took in 1998 while serving on the National Advisory Committee to the EPA Administrator with respect to the CEC.

141. Other analysts of international economics underscore the importance of national economic and other policies even in a globalized world. That is Gilpin's basic thesis: "This is still a world where national policies and domestic economies are the principal determinants of economic affairs." GILPIN, *supra* note 29, at 3. Gilpin cites Gunnar Eliasson, Michael Porter, and others in support of his argument. He makes special reference to NATIONAL DIVERSITY AND GLOBAL CAPITALISM: DOMESTIC INSTITUTIONS AND THE PRESSURES FOR NATIONAL CONVERGENCE (Suzanne Berger & Ronald Dore eds., 1996), which concludes that national institutions resist change, different systems can be equally effective within national societies, and the domestic effects of globalization are largely determined by the states themselves. GILPIN, *supra* note 29, at 186.

142. Inadequate port facilities on Mexico's Gulf of Mexico coast, for example, mean inefficient trans-shipment in Houston of many Mexican imports and exports. Mexico's national rail system, thanks to substantial foreign investment, is just now undergoing long-overdue modernization.

143. GARY C. HUFBAUER ET AL., NAFTA AND THE ENVIRONMENT: SEVEN YEARS LATER 40 (2000) (reporting that only 3 percent of Mexico's federal tax receipts are returned to municipalities). The net result is that Tijuana's municipal revenue in 1996 was a mere U.S.\$64 million compared to San Diego's revenues of U.S.\$2.8 billion to serve a population only twice as large. Similarly, per capita municipal revenues in Ciudad Juárez were less than one-tenth of the revenues for neighboring El Paso.

144. *Id.* at 39.



1990s. However, the government failed to implement social supports, leading to economic despair for many poor and inefficient farmers, and outmigration from the Mexican countryside to Mexican urban areas or across the border to the United States and Canada.<sup>145</sup>

Above all, however, education is the principal missing ingredient. As stated by Sydney Weintraub, a veteran analyst of U.S.-Mexican relations, "Mexico's going to have to graduate the way all other countries do. . . . It's inevitable that countries that earn their money through relatively cheap labor, as their situation improves and the labor costs go up, they just have to move up on the technology scale."<sup>146</sup> Education is vital for this graduation,<sup>147</sup> but the average Mexican worker has just eight years of schooling.<sup>148</sup> The problem of Mexico's insufficient investment in education is not new.<sup>149</sup> At the end of the 1980s, Mexico was spending less than 4 percent of its Gross Domestic Product (GDP) on education, compared to a UNESCO benchmark of 8 percent for developing countries.<sup>150</sup> Moreover, Mexico is investing disproportionately in higher education at the expense of primary and secondary education. Basic education in the rural areas is particularly deficient.<sup>151</sup> Until Mexico makes investments in general education and worker training sufficient to generate large numbers of well-educated workers for skilled labor, managerial, and service positions, low wage rates will persist.<sup>152</sup> Businesses needing skilled workers and midlevel managers will locate elsewhere in the meantime. One of Mexico's keenest competitors, China, offers not only vast supplies of low-cost unskilled labor, but also a steady supply of managers.<sup>153</sup>

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145. Wise, *supra* note 5, details some of these domestic policy failures and their consequences. SIMON, *supra* note 13, at 3, also attributes the migration of workers to the border cities to a "failed development strategy emphasizing rapid industrial development" that left rural areas impoverished.

146. Thompson, *Better Class of Factory*, *supra* note 117 (quoting Sydney Weintraub).

147. Other factors cited by investors and other analysts include fighting crime, reducing corruption, creating a more transparent court system, and adopting a simpler tax code. Malkin, *supra* note 99.

148. VALVERDE, *supra* note 55, at 16 ("The challenge for developing countries is to provide education and skills for the workforce.").

149. See, for example, a 1992 statement by Dr. Albert Garcia Rocha of the Colegio de Mexico lamenting that insufficient investment in human capital was leading to deficiencies in education, in N. AMER. INST., *LEARNING FOR LIFE* 61-62 (Rod Dobell & Michael Neufeld eds., 1992).

150. *Id.* at 70.

151. *Id.* at 62 (mentioning inequitable subsidies that favor the urban and the wealthy, and noting that Mexico spends fully half of its public education budget on higher education, as compared with 20 percent in Canada.).

152. BROWN ET AL., *supra* note 133, at 28, note that one aspect of the industrial modernization that comes with investment by multinational corporations is that the demand for skilled workers increases, pushing their wage rates higher, while the demand for unskilled labor diminishes, driving wages down for those workers.

153. One analyst has remarked that China invests ten times more than Mexico on foreign degree studies for engineers and business managers for each dollar of gross domestic product. There may be a "brain drain" risk with that particular strategy, although many among the Mexican elite have advanced

In conclusion, the *maquiladora* issue emphasizes the dark side of NAFTA. Regarding economic integration addressed in this part, NAFTA created additional opportunities for businesses to deepen integration by removing national barriers to trade and investment. NAFTA deliberately omitted any programs or institutions for the coordination of national economic policies.<sup>154</sup> In that sense, NAFTA is a negative force, altering the economic dynamics without providing any cooperative mechanisms for addressing the social and environmental consequences of intensified economic activity. Adjustment to the effects of NAFTA was left to each national government. Inevitably, *maquiladoras* became the symbol of the policy vacuum that NAFTA created and that Mexico, in particular, has failed to fill.

Even so, the distinction between the real NAFTA and NAFTA as a symbol persists. It is true that "[t]he *maquiladora* industry highlights the dilemmas and contradictions of 'sustainable development' and ecological crisis along the border . . ."<sup>155</sup> But, as this part has argued, it is also true the relationship between *maquiladoras* and the border's ecological crisis is "a local manifestation of global phenomena."<sup>156</sup> It is not attributable in any meaningful way to the real NAFTA, but only to NAFTA as a symbol of inappropriate policies. Moreover, "it would be absurd to lay the blame for all border environmental problems at the doors of the *maquiladoras*. The roots of many current problems, particularly water contamination, air pollution, and raw sewage existed decades before the *maquiladoras* arrived."<sup>157</sup> Therefore, local and national policy failures—in the United States as well as in Mexico—are the real culprit, not NAFTA.

### III. ENERGY IN THE BORDER AREA: THE SYMBOLIC NAFTA AND EMERGING POST-NAFTA ISSUES

Part II has shown that there is only a weak link between the real NAFTA and *maquiladoras*, but a strong symbolic linkage between the two with powerful negative connotations. The cross-border ramifications of energy production and energy trade in the border region, in contrast, affect powerful national and state economic and regulatory interests even though NAFTA's legal provisions on energy trade are weak and ambiguous. The very weakness of the real

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degrees from U.S. or European universities. What Mexico needs is a less elitist approach to education and training targeted toward basic skills for production workers, and a more ample supply of midlevel managers and technical specialists, most of whom could be educated in Mexico.

154. There is no NAFTA economic equivalent to the CEC. By design, the NAFTA Free Trade Commission has no staff (except for a very small administrative secretariat), no program, and no budget.

155. Sklair, *supra* note 80, at 31.

156. *Id.*

157. *Id.*

NAFTA creates an opportunity for governmental, private sector, and civil society actors along the border to evoke NAFTA as a positive symbol of their shared interests and their need to deepen collaboration across the border. If the interested parties from these sectors focused their attention on energy development and regulation, they could make substantial improvements in regional energy policy and mitigate the environmental effects of energy production and consumption for the entire region. One element of the real NAFTA, the CEC, has already provided some information and analysis to help the region in this process, and could be a vehicle to harmonize policies and provide political support at the national level.

A. The Present Energy Situation in Southern California and Baja California del Norte

The electricity generation capacity in place or scheduled to come on line in California appears to be adequate to meet current domestic demand in the state, but may be insufficient to meet peak demands five years from now.<sup>158</sup> Some of California's current supply includes power imported from the Pacific Northwest and other parts of the United States. The state had notoriously poor experience with its reliance on these out-of-state sources during its "energy crisis" in 2000–2001. In theory, Baja California could become another source of supply for California, but at present there are only limited transmission connections in place to carry electricity across the border.<sup>159</sup>

Baja California's electricity situation is more tenuous. High levels of population growth, an expanding demand for residential electricity, and continued

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158. CAL. ENERGY COMM'N, CALIFORNIA'S 2003 ELECTRICITY SUPPLY AND DEMAND BALANCE AND FIVE-YEAR OUTLOOK (2003), available at [http://www.energy.ca.gov/electricity/2003\\_supply\\_demand\\_peak.pdf](http://www.energy.ca.gov/electricity/2003_supply_demand_peak.pdf) (last visited July 28, 2003). This official assessment may be optimistic; before the summer of 2001, the Commission estimated a surplus of energy supply over demand of more than 10,000 MW, while other sources projected a shortage of as much as 13,000 MW. See Letter from the U.S. General Accounting Office to Rep. Stephen Horn, June 29, 2001, available at <http://www.gao.gov/new.items/d01870r.pdf> (last visited July 29, 2003). The projections of a shortage turned out to be correct.

159. During the "energy crisis" period, Mexico had surplus power to offer but it could supply only about 50 to 80 MW through the available connections. Jonathan Treat, *Cross-Border Energy Connections: Truth and Fiction*, BORDERLINES, April 2001, at 11. (*Borderlines* is a publication of the Americas Program of the Interhemispheric Resource Center, <http://www.us-mex.org>). At present, there are only three interconnections between the electricity grids in Baja and California. SCOTT VAUGHAN ET AL., ENVIRONMENTAL CHALLENGES AND OPPORTUNITIES OF THE EVOLVING NORTH AMERICAN ELECTRICITY MARKET 55 (Comm'n for Envtl. Cooperation of N. Am., Working Paper, 2002), available at [http://www.cec.org/files/pdf/Electr-vaughan\\_en.pdf](http://www.cec.org/files/pdf/Electr-vaughan_en.pdf) [hereinafter CEC WORKING PAPER]; see also Diane Lindquist, *Plenty of Power: Deals with Private Firms Spark Growth of Mexico's Energy Empire*, SAN DIEGO UNION-TRIB., July 28, 2001, at C-1 (reporting the capacity of the two interconnections near Tijuana as 408 MW, and noting plans to establish new connections to increase the capacity to 2400 MW).

development of energy-consuming industries lead to projections of increased electricity demands as high as 15 percent per year, or a doubling of demand in the next five years.<sup>160</sup> Even more moderate projections by the Mexican national electricity agency, the Comisión Federal de Electricidad (CFE) show the need for a doubling of generating capacity in Baja over the next ten years.<sup>161</sup> That electricity will have to come from Baja itself or from the United States; no high-voltage transmission lines or natural gas pipelines connect the Baja peninsula with the rest of Mexico.<sup>162</sup>

Three environmental factors bear strongly on energy development for this region. One is air quality. Much of the region, even more rural areas like the Imperial Valley of California, confront problems of high readings of ozone and particulate matter. Urban areas of Baja have more serious problems, especially with particulate matter. Because the general air flow in the region is from the south or southwest, California residents have a particular interest in limiting sources of air pollution in the border regions of Baja.

The second environmental issue derives from the first. Because of the relatively poor air quality on both sides of the border, energy companies and energy planners are expecting almost all of the new generating capacity to come from units burning natural gas as a fuel. The region has virtually no local sources of gas, however. One outside source, already being used, is natural gas from elsewhere in the United States or from Canada, transmitted over pipeline networks (which might need to be extended to meet new demands, especially in Baja).<sup>163</sup>

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160. BORDER ENERGY STRATEGY COMM'N, ENERGY ISSUES IN THE CALIFORNIA-BAJA CALIFORNIA BINATIONAL REGION 5 (2002) (giving a figure of 11.3 percent annual growth in demand for 1988–2001).

161. *Id.* (citing CFE projections of continued growth in demand at a rate of 6–7 percent per year for the next decade, with a doubling of generating capacity from 2115 MW to 4230 MW). The final study report from the CEC, also using CFE data in part, shows a similar projected increase in generating capacity for Baja of 2644 MW from 1999–2007 (of which about 500 MW has already been built). COMM'N FOR ENVTL. COOPERATION OF N. AM., ENVIRONMENTAL CHALLENGES AND OPPORTUNITIES OF THE EVOLVING NORTH AMERICAN ELECTRICITY MARKET: SECRETARIAT REPORT TO COUNCIL UNDER ARTICLE 13 OF THE NORTH AMERICAN AGREEMENT ON ENVIRONMENTAL COOPERATION 13 (2002) [hereinafter CEC SECRETARIAT REPORT].

162. BORDER ENERGY STRATEGY COMM'N, *supra* note 160, at 5. The energy supply situation in the rest of Mexico is comparable to that in Baja. Demand is conservatively projected to increase by about 5 percent per year; meeting that demand will require about \$50 billion of investment in the next ten years. Elisabeth Malkin, *Mexico Turns to Investors to Add to Power Capacity*, N.Y. TIMES, March 18, 2003, at W1. This level of investment amounts to 3 percent of Mexico's year 2000 gross domestic product. CEC SECRETARIAT REPORT, *supra* note 161, at 4.

163. BORDER ENERGY STRATEGY COMM'N, *supra* note 160, at 7–8. In spite of its extensive reserves, Mexico is unlikely to be a source of gas for this region for many years. There is no Mexican pipeline in place, and Mexico needs huge infusions of capital—probably foreign capital—to develop its own gas resources. AMERICAS PROGRAM AT THE INTERHEMISPHERIC RES. CTR., ENERGY DEVELOPMENT ON THE U.S.-MEXICO BORDER 2 (2002) (citing figures of \$30–50 billion for Mexico to develop its own natural gas supplies to meet domestic demand); Bonnie Pfister, *Pemex May Invite Foreigners: Private Firms*

But more distant sources may need to be tapped. Multiple projects are being proposed for the development of port facilities and terminals along the Pacific Coast of Baja to allow the import of liquefied natural gas (LNG) from Asia.<sup>164</sup> Such projects, of course, raise concerns about aesthetic and environmental effects on as yet undeveloped coastal areas.<sup>165</sup>

The third environmental issue is water, in terms of both supply and environmental quality. Power-generating equipment needs to be cooled, so every power plant requires a generous amount of water. Finding this water (more properly, acquiring the rights to this water) is clearly a challenge in itself in this highly arid region. Water supply could, in fact, become a constraining factor in the amount of power that can be generated in this region. The environmental quality issue arises because a substantial amount of the water that is used for cooling is lost to evaporation. Water taken from streams and rivers and not returned to them can have consequences for freshwater species, riparian habitats, and downstream areas such as the Salton Sea.

With the current tightness in energy supply, urgent pressures to develop new energy capacity to meet future demand, and a slack economy in recent years, the energy market in the southern California/Baja California region verges on chaos. There is keen interest among independent power producers to build new capacity. Stringent environmental requirements and other regulatory complexities in California lead to delays in the siting and permitting of energy facilities. Higher costs are associated with those delays. Only small gas-fired turbines designed exclusively for intermittent use to meet peak demand are being constructed on the California side of the border. South of the border, circumstances are different. The downturn in the Mexican economy and the loss of jobs in Baja has made government officials and business interests eager for new sources of investment and employment. They are especially disposed to welcome energy investments, not only to meet domestic demand, but also to export to their U.S. neighbors.

In view of this situation, it is not surprising that about 3500 MW of new electricity-generating capacity is already under construction or planned for the region in the next three years.<sup>166</sup> Some capacity being built or planned in Baja is intended exclusively for the Mexican market, and all the peak-load capacity

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*Would Help Mexico Boost Natural Gas Production*, SAN ANTONIO EXPRESS-NEWS, Sept. 29, 2002, at K1 (reporting that Mexico currently imports about 10 percent of its natural gas from the United States).

164. BORDER ENERGY STRATEGY COMM'N, *supra* note 160, at 8.

165. Diane Lindquist, *Mexico Sets Rules to Build Gas Projects*, SAN DIEGO UNION-TRIB., Aug. 3, 2002, at C1 (reporting expectations that one or two amongst at least four competing LNG terminal proposals will be built in Baja); Louis Sahagun, *Resort Balks at Energy Hub Plan*, L.A. TIMES, May 27, 2002, at B1 (reporting on a projected 500 percent increase in demand for gas in Baja and local opposition to plans for LNG terminals).

166. BORDER ENERGY STRATEGY COMM'N, *supra* note 160, at 7.

being built or planned in California is exclusively for the California market.<sup>167</sup> But two controversial projects totaling 1100 MW of capacity are being built on the Mexican side of the border by two American companies to generate electricity for export to California.<sup>168</sup> As detailed in Part III.B., these projects dramatize the multiple transboundary environmental consequences of energy development for the region and the controversies that arise when the jurisdiction of the regulators of electric power generation and distribution remain confined to their respective territories.

B. NAFTA and the Boundary: Obstacles and Opportunities  
for Energy Coordination

1. The Obstacles

The very small number of pipelines and transmission lines that now connect Baja with California make the U.S.-Mexican border more of a physical barrier to trading energy than it is to trading goods. But the very absence of interconnections is merely the physical manifestation of a more formidable barrier: the regulatory separation that keeps the energy markets in the two countries isolated from one another. Especially in the United States, the complex allocation and layering of energy regulatory jurisdiction between state and federal statutes, regulations, and agencies reinforces the separation because foreign interests have difficulty navigating the regulatory maze. The final confounding factor is the fragmentation of authority through deregulation. Because deregulation has proceeded at different speeds and in different forms among the three NAFTA countries and among the subfederal jurisdictions in each, it has become almost impossible to match up the regulatory frameworks on the two sides of a cross-border transaction.<sup>169</sup> The regulatory and legal obstacles not only generate confusion, but they also allow parties involved with energy projects having elements on both sides of the border to manipulate the differences and the gaps between the regulatory systems on each side. We will see this in the case of the two power plants being built in Mexicali.

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167. Although there are no plans at the moment to export California-generated power to Baja, the situation is different in neighboring Arizona, where Tucson Electric Power is seeking permits for both transmission lines and possible new generating facilities that would allow it to export surplus power to neighboring Nogales, Sonora. Mitch Tobin, *Critics Fight Border Power Line*, ARIZ. DAILY STAR, Aug. 30, 2003, at A1.

168. One project is being built by Semptra Energy; all of its electricity would be exported to California. The other project involving four generating units is being built by InterGen. Power from two units would be exported to California; power from the other two units would be sold to Mexico's CFE for delivery to Mexican customers. See text *infra* at notes 177–185.

169. See generally, J. Owen Saunders, *North American Deregulation of Electricity: Sharing Regulatory Sovereignty*, 36 TEX. INT'L L.J. 167 (2001).

Ironically, NAFTA does nothing to tear down the regulatory barriers to doing energy business across the border. Indeed, NAFTA adds a barrier of its own with respect to trade in electricity because it creates substantial uncertainty about whether or how NAFTA itself might affect national and state regulation of electricity generation, transmission, and delivery to the final consumer. Because of constitutional provisions, historical tradition, and strong political pressures, Mexico has a powerful state role in all aspects of energy.<sup>170</sup> To preserve that role, Mexico negotiated substantial flexibility for its federal government to retain direct control over electricity production and distribution; this flexibility is reflected in the complex tapestry of rules, exceptions, and reservations in the energy chapter of NAFTA (Chapter 6). Subsequently, however, Mexico adopted national legislation and regulations that open parts of this sector to outside investment and control. In particular, foreign interests are now authorized to control independent power production facilities, but these facilities must sell their electricity to the national CFE for distribution to residential and commercial customers.<sup>171</sup> Industrial cogeneration of electric power is also permitted with excess power to be sold to CFE.<sup>172</sup> The constitutionality of some of these legislative changes is being contested, compounding obscurity with unpredictability.<sup>173</sup>

This is only the beginning of the difficulties in applying NAFTA to electricity. The potential clearly exists in all three countries for significant federal and state regulatory power over energy generation and distribution to be used to help national businesses at the expense of foreign providers. But even veteran trade lawyers and government officials cannot agree how NAFTA should be interpreted if such common state regulatory programs as minimum renewable energy portfolio standards are to be applied to power producers in another country.<sup>174</sup> Indeed, the experts cannot even come to a consensus on whether electricity is a “good” or a “service” under NAFTA, a legal distinction that determines which trade rules will govern transactions across the border.<sup>175</sup>

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170. For a succinct and engagingly told history, see Ewell E. Murphy, Jr., *The Prospect for Further Energy Privatization in Mexico*, 36 TEX. INT'L L.J. 75, 76–77 (2001).

171. Jorge Jiménez, *The Great Impact of NAFTA in the Energy Sector: A Mexican Perspective*, 18 J. ENERGY & NAT. RESOURCES L. 159, 170 (2000).

172. *Id.*

173. Patrick Del Duca, *The Rule of Law*, 51 UCLA L. REV. 35, 129–34 (2003).

174. HORLICK ET AL., COMM'N FOR ENVTL. COOPERATION OF N. AM., NAFTA PROVISIONS AND THE ELECTRICITY SECTOR 6–19 (2002), available at <http://www.cec.org/files/pdf/nfta5-final-e2.pdf> (last visited Sept. 3, 2003). In this long section of their paper, these experts canvas U.S. state energy regulations and raise trade rule conflicts that could arise under NAFTA, the GATT, and the General Agreement on Trade in Services. They pay considerable attention to the question of state requirements for certain percentages of electricity to be generated by renewable energy sources, and the peculiar state definitions of “renewable” that often exclude, for example, hydro power, the predominant source of electricity throughout Canada.

175. *Id.* at 2–4 (noting that a U.S. International Trade Commission report characterized electricity generation as a “service,” but offering other support for the authors’ view that electricity

Another layer of confusion and complexity arises because, in most jurisdictions, the generation of electricity is a distinct activity from its transmission, which in turn is distinct from final distribution. These distinct activities can be carried out by different owners and operators.<sup>176</sup> Different NAFTA rules will apply for each phase with respect to investments as well as purchases and sales. So, although electricity is already being traded across borders in North America in modest quantities, and new projects based on transboundary transfers are moving forward, the legal and regulatory environment for those transactions is complex and in significant respects remains unclear.

Symptomatic of the rush for energy development and of the multiple factors shaping it are two power plants now beginning operation in Mexicali, Baja California.<sup>177</sup> One plant, built by Sempra Energy, is a 600 MW unit that will export all of its output to U.S. customers. It was built to U.S. emission control specifications, including "best available control technology" and continuous emissions monitoring, and is projected to emit less than one ton per day of nitrogen oxides (which contribute to smog) and particulate matter.<sup>178</sup> The other plant, being built by InterGen, will have four gas-fired turbine units with a total capacity slightly above 1000 MW.<sup>179</sup> Two of those units will export their electricity to California, and will have controls to reduce nitrogen oxides.<sup>180</sup> The other two, which are under long-term contract to sell their electricity to the Mexican national electricity distributor CFE for ultimate distribution to Mexican customers, were originally designed without pollution controls for nitrogen oxides, since such controls are not required in Mexico.<sup>181</sup> Even so, the controlled InterGen units are said by U.S. environmental officials to emit at higher levels than would be permitted in the United States, and the entire InterGen

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itself should be viewed as a "good"). Electricity can be considered a "good" in the sense that physical objects—electrons—move across the border. As a good, electricity would be subject to strict national treatment requirements that could constrain state regulatory power. Alternatively, the provision of electricity to a customer through wires connected to larger grids can be viewed as a "service." NAFTA offers more flexibility and more state regulatory control over providers of services.

176. Thus, it could be that the generator is producing a "good" (a stream of electrons), but that the transmission company and retailer are providing a "service" (delivering the electrons).

177. The following description comes primarily from several sources: Diane Lindquist, *New Border Plants Will Take Toll on Air Quality*, SAN DIEGO UNION-TRIB., June 27, 2001, at A1; Gary Polakovic, *Power Plants Sprouting at Border: In Mexico, They Can Emit More Pollution Than in U.S.; Backers Tout Chance to Serve 2 Nations*, L.A. TIMES, June 15, 2002, at B1; and Elliot Spagat, *South of the Border*, WASH. TIMES, June 17, 2003, available at <http://www.washtimes.com/business/20030617-094526-9054r.htm>. Further details are recited by the federal district court in its order in the case of *Border Power Plant Working Group v. Dep't of Energy*, 260 F. Supp. 2d 997 (S.D. Cal. May 2, 2003).

178. The court gives figures of 170 tons per year of nitrogen oxide and 216 tons per year of PM-10 (a measure of fine particulates). *Id.* at 1008.

179. *Id.* at 1006.

180. *Id.* at 1007.

181. *Cf. id.* at 1007.



plant could emit five tons per day of nitrogen oxides and two tons per day of particulate matter, exacerbating air quality problems in Imperial County, California, and in Mexicali itself.<sup>182</sup>

Thus, we can see that InterGen sought to take advantage of regulatory differences between California and Baja, not merely to get more rapid permission to site and construct the plant, but also to reduce investments in air pollution control. Both companies, however, were constrained by anticipated consumer and public protest to assure that their units generating power for the U.S. market met the basic pollution control requirements that would have applied in California. Moreover, in response to concerns about the effects of the Mexicali power plants on California air quality, the U.S. Senators from California threatened to use regulatory differences in a counter strategy. They introduced legislation to cut off access to U.S. natural gas supplies for any border area power plant that did not have pollution controls comparable to those required in the United States. In response to this threat, InterGen agreed to install nitrogen dioxide controls on the two units of its facility that will be generating power for the Mexican market.<sup>183</sup> We can expect to see similar “gaming” of regulatory disparities with respect to other energy projects, such as LNG terminals.

New high-voltage transmission lines are carrying the electricity from Mexicali north to the California grid. These will, however, do little to diminish interconnectivity as a barrier to energy trading because their capacity will be limited to the power the companies intend to export.<sup>184</sup> On this aspect of the projects, regulatory barriers and their manipulations also come into play. Permission for the U.S. segments of these transmission lines to connect to the existing U.S. grid must come through a “Presidential Permit” issued by the U.S. Department of Energy (DOE). DOE’s decision to grant the permits is subject to the environmental impact assessment requirements of the National Environmental Policy Act (NEPA). In making its decision to grant the permits, DOE evaluated only the environmental effects of the construction of the power lines themselves, disavowing any authority to review the operating conditions of the power plants or to specify the environmental controls they should employ. On this basis, DOE purported to discharge its NEPA obligations through a “finding of no significant impact.” Environmental organizations have contested that finding in federal court. In a preliminary ruling on cross-motions for summary judgment the court questioned DOE’s decision not to evaluate the U.S. environmental impacts of

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182. The court gives figures of approximately 1800 tons per year of nitrogen oxides and 724 tons per year of PM-10. *Id.*

183. Spagat, *supra* note 177.

184. The line for the InterGen plant would have a nominal capacity of 600 MW (a second 600 MW line might be built in the future). *Id.* at 1006. The line for Sempra would have a capacity of 500 MW (with a second 500 MW line possible in the future). *Id.* at 1007.

the power plants' operation.<sup>185</sup> However, the court gave DOE a full year to complete its additional environmental studies. In the meantime, it denied the plaintiff's motion for a preliminary injunction against cross-border transmission of power.<sup>186</sup> In late July, 2003, Sempra Energy announced that it was beginning full commercial operation of its Mexicali facility.<sup>187</sup>

## 2. The Symbolic NAFTA Opportunity

In this circumstance of uncoordinated development and regulation in an ambiguous legal environment, independent observers are unanimous in invoking the positive symbolic power of NAFTA to call for greater binational or trilateral cooperation.<sup>188</sup> They note that the market for energy in North America is increasingly integrated, and that this integration demands a corresponding synthesis of policy on related issues, especially environmental protection and resource management. The CEC, in its recent report on the "challenges and opportunities" of the evolving market in electricity,<sup>189</sup> focuses some attention on the important question of choice of fuel for generating electric power, a matter that has a significant bearing on environmental impacts. The CEC notes that fuel choice for a given power plant is determined by at least four factors: fuel price, technology, access to infrastructure, and standards policy.<sup>190</sup> A robust program of government coordination in managing the North American electricity market would require coordination of policies and programs in all four areas.

Such a policy coordination challenge is daunting but not impossible. If NAFTA is to realize its potential and fulfill its symbolic role in trans-

185. *Id.* at 1033. Interestingly, the environmental impact that seems to concern the court most is the consumption of water by the power plants and the potential disruption to the ecology of the Salton Sea from diminished water flows northward across the border. *Id.* at 1022–23.

186. Diane Lindquist, *Federal Judge Won't Block Electricity to California From Mexican Power Plants*, SAN DIEGO UNION-TRIB., June 5, 2003, at C1. Power transmission from the Mexicali plants was already occurring as part of the testing of the generating and transmitting facilities.

187. Press Release, Sempra Energy, Sempra Energy Resources' Three New Power Plants Operational in Arizona, California and Mexico (July 29, 2003), available at [http://public.sempra.com/newsreleases/viewPR.cfm?PR\\_ID=1567&Co\\_Short\\_NM=SE](http://public.sempra.com/newsreleases/viewPR.cfm?PR_ID=1567&Co_Short_NM=SE).

188. "A synergistic, interdependent energy market is developing in the border region, but the related financing, regulatory, administrative and policy structures are not in place to adequately exploit the benefits of this new reality, or to deal with the challengers it creates." BORDER ENERGY STRATEGY COMM'N, *supra* note 160, at 4. "There are a number of areas where opportunities exist for greater cooperation and compatibility. Trilateral focus in these areas could help realize important environmental gains and economic efficiencies in the electricity sector." CEC SECRETARIAT REPORT, *supra* note 161, at 23. "Faced with these rapid changes, a wide spectrum of border community members responding to concerns in Baja California and California are leading a charge to demand a different set of rules for energy development in the region." Dick Kamp, *Border Residents Push for Controls on Proposed Power Plants*, BORDERLINES UPDATER, Sept. 5, 2001, at 4, available at <http://www.americaspolicy.org/updater/2001/Sept5bushfox.html>.

189. CEC SECRETARIAT REPORT, *supra* note 161.

190. *Id.* at 17–21.

forming the lives of North America's citizens, then their governments—state, provincial, and federal—must rise to the challenge. As the CEC report points out, the failure to coordinate could undermine domestic strategies to balance health and environmental concerns with an abundant and reliable electricity supply, spark unwelcome environmental trade disputes, and discourage economic approaches to environmental management like emissions trading programs.<sup>191</sup> Avoiding these pitfalls through policy coordination under the symbolic umbrella of NAFTA would have multiple benefits for the border area. Energy production, distribution, and use raise numerous, complex, and crosscutting issues for the border region, which call for a coordinated, comprehensive approach: from strategic planning to facility siting to environmental regulation to energy management and technological development. Environmental considerations have special prominence in a region already under environmental stress. Air quality management is a leading issue all along the border that bears on fuel choice and fuel use, energy facility location, and the location of energy users such as industrial facilities. Energy facilities such as LNG terminals, gas pipelines, and electricity transmission lines may have effects on sensitive habitats or compete with other desired land uses. Both the production and use of energy may involve large-scale consumptive use of fresh water in a region where fresh water supplies for human use are already overcommitted, and competing demands for ecological uses (such as the restoration of the Colorado River delta) are getting more careful consideration in both countries. Economic development is also intimately connected with the availability and pricing of various forms of energy.

As Professor Bustamante has commented, the idea of NAFTA can have effects on nations and regions. "NAFTA can play a big part in this. If economic integration does not deeply affect 'who' we are, it may be said to condition 'how' we are, by influencing the material resources and opportunities we all have at our disposal to realize our identities."<sup>192</sup> Symbolically at least, among those opportunities are more "vigorous exchanges"<sup>193</sup> in governing matters of common concern to political leaders, businesses, and civil society in general on both sides of the border.

How could a coordinated North American policy better approach electricity market regulation? As befits the complexity of energy environment relationships, it should address multiple issues and include institutional mechanisms that would enable participation by a broad range of government officials, private sector representatives, community leaders, independent technical and environmental experts, and ordinary citizens. It should plan for, and manage,

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191. *Id.* at 22.

192. Bustamante, *supra* note 41, at 194.

193. *Id.* at 188.

facility siting and the acquisition and delivery of fuels, especially in reference to air quality effects, water supply and quality issues, and land use patterns. Economic development, population growth, and transportation systems should all be addressed in planning and implementation because of their effect on energy demand. Demand-side management through programs for industrial, residential, and commercial energy efficiency and conservation should also be included. And as any Californian can now tell you, the design of the interlocking regulatory structures for power generation, power distribution, fuel choice, and energy pricing is extremely important, so that regulatory incentives do not lead to market distortions or create opportunities for market manipulation.

Promoting such extensive cooperation is not easy. Emblematic of the challenge is the question of transboundary environmental impact assessment (TEIA). Environmental impact assessments serve importantly to identify alternatives to a particular project or location, and to identify available measures to mitigate unavoidable environmental impacts.<sup>194</sup> International law holds nations accountable for significant transboundary environmental effects from activities within the national territory, and calls for consultation with affected countries when such environmental effects are anticipated from a new activity. The Espoo Convention extends principles of environmental impact assessment to the assessment of the transboundary environmental effects of an action occurring or originating in a single nation.<sup>195</sup>

Clearly, the citizens and governments of the U.S.-Mexican border area cannot get an accurate picture of how individual energy facilities fit within the regional environment if the environmental impact assessment only includes the effects on its own side of the border. As the CEC has demonstrated through its work on continental pollutant pathways, air emissions from sources such as power plants can affect air and water quality hundreds or thousands of miles away.<sup>196</sup> Energy facilities also burden fresh water resources. The siting of LNG terminals on the Baja California coast and the shipping traffic they would

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194. The Council on Environmental Quality regulations guiding federal agency implementation of NEPA's environmental impact statement requirement calls the analysis of alternatives to the proposed action "the heart of the environmental impact statement." 40 C.F.R. § 1502.14 (2002). Mitigation measures are to be part of the alternatives analysis, 40 C.F.R. § 1502.14(f), or separately discussed, 40 C.F.R. § 1502.16.

195. Convention on Environmental Impact Assessment in a Transboundary Context, Feb. 25, 1991, Done at Espoo, Finland, 1989 U.N.T.S. 309, 30 I.L.M. 800 (1991). Appendix II to the Convention lists the information to be included in an assessment, including reasonable alternatives, the no-action alternative (paragraph b), and mitigation measures (paragraph e). This Convention came into force in 1997. The United States is a signatory, but has not ratified; Canada is a party; and Mexico (which was not eligible to sign) has not ratified.

196. CEC SECRETARIAT REPORT, *supra* note 161, at 10-11 (showing extensive airsheds such as the one running from northern Chihuahua in Mexico to the lower Mississippi Valley).

draw may have significant implications for the coastal environment or for the migratory gray whales; not to mention land use considerations in the routing of pipelines on both sides of the border. With this range of potential environmental consequences, comprehensive environmental impact assessment, meaning in this context transboundary assessment, can clearly contribute to a sound pattern of energy planning development. It would serve to generate and disseminate environmental effects information, to force the consideration of long-term as well as short-term consequences, to stimulate the sharing of information and collaboration across the lines of bureaucracies, and to catalyze effective public participation.<sup>197</sup>

Within North America, TEIA is complicated by differences among the three national legal regimes for environmental impact assessment (EIA). In Mexico, an EIA of any new project, private or public, is required as a matter of national law. In Canada, EIA, like most matters of environmental regulation, is under the jurisdiction of the provinces. But Canada's federal government, as a party to the Espoo Convention, does have the authority to require TEIA for projects covered by Espoo. In the United States, the national law on EIA, NEPA, governs only federal projects or state and private projects that require a significant federal permit or benefit from federal financing. The extent to which NEPA requires attention to environmental effects outside the United States is a controversial and unresolved question. For this reason, the United States is not a party to the Espoo Convention. California has state EIA laws that cover many more projects,<sup>198</sup> but many other states along the Mexican and Canadian borders have no equivalent state law.

Because of these conflicting national laws, and because of the significant federalism issues that arise in the EIA context for Canada and the United States, the NAFTA governments have failed to fulfill their mandate under the North American Agreement on Environmental Cooperation to agree on "obligations" for TEIA.<sup>199</sup> The mere fact that TEIA is still an issue requiring discussion within North America illustrates an important failure of the symbolic NAFTA. They did not neglect the issue, but for various reasons having as much to do with differences in governmental structures from one country to another as with

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197. These basic concepts are succinctly summarized in John H. Knox, *The Myth and Reality of Transboundary Environmental Impact Assessment*, 96 AM. J. INT'L L. 291, 297-98 (2002).

198. Indeed, the California Environmental Quality Act (CEQA) requires assessments for anything that can be classified as a "project" or anything not specifically exempt by statute or category. CAL PUB. RES. CODE § 21000 (West 2003).

199. In this agreement, the governments committed within three years to develop and recommend TEIA procedures "with a view to agreement between the Parties . . . on obligations." North American Agreement on Environmental Cooperation, 1993, art. 10(7)(a), available at [http://www.cec.org/pubs\\_info\\_resources/law\\_treat\\_agree/naaec/naaec04.cfm?varlan=english#10](http://www.cec.org/pubs_info_resources/law_treat_agree/naaec/naaec04.cfm?varlan=english#10) (last visited Sept. 8, 2003). Agreement on these obligations was to be accomplished in three years, by 1998.

differences in their environmental policies, the three national governments have been unable to agree on a coordinated TEIA policy.<sup>200</sup> The U.S. Council on Environmental Quality in 1997 issued guidance to U.S. government agencies because it reached the legal conclusion that "agencies must include analysis of reasonably foreseeable transboundary effects of proposed actions in their analysis of proposed actions in the United States."<sup>201</sup> There is one formal state-provincial agreement on TEIA, but even that is limited to a particular region along their shared border.<sup>202</sup> There are some other commitments by governors to provide notification of project proposals that may have significant transboundary environmental effects, but these are meant to facilitate cross-border participation in decisionmaking rather than to assure full assessment of environmental effects.<sup>203</sup> Certainly, none of the systems in place or conceivable in the near future comes close to a requirement for full transboundary environmental assessment of facilities like the Sempra and InterGen power plants now under construction near Mexicali. And when environmental assessments become expensive or touch on politically sensitive matters, experience shows a tendency on both sides of the border to pull back from true cooperation. When the United States and Mexico negotiated at length over an important pollutant tracer study to identify the sources of air pollution severely degrading visibility in Big Bend National Park, Mexico declined to participate in the study. Although this was partly for budgetary reasons, it was probably also because Mexico feared that the study would implicate its big coal-fired power plant in Piedras Negras, Coahuila, as well as sources in the major industrial zones in and around Monterrey.<sup>204</sup>

Coordination and cooperation is clearly possible, however, even on complex issues. There is a long history of bilateral environmental cooperation across both borders in North America.<sup>205</sup> The United States and Canada have had particular success in addressing a wide range of issues in the management and protection of the Great Lakes. The United States and Mexico have handled complicated and politically sensitive questions of water use in the Southwest.

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200. For a thorough, learned discussion of these differences, see Knox, *supra* note 197.

201. COUNCIL ON ENVIRONMENTAL QUALITY, GUIDANCE ON NEPA ANALYSES FOR TRANSBOUNDARY IMPACTS (1997), at <http://ceq.eh.doe.gov/nepa/regs/transguide.htm>.

202. ENVIRONMENTAL CHALLENGES, *supra* note 159, at 52 (citing the agreement between the State of Washington and British Columbia for TEIAs in the Puget Sound region).

203. *Id.*

204. As the U.S. proceeded with the study on its side of the border, it became apparent that the Mexican sources were not major contributors. Rather, pollution from the Dallas and Houston areas (especially coal-fired power plants in northern Texas) and areas further north and east in the United States, emerged as the more significant problem. Chris Roberts, *Study: Big Bend Haze Sources Diverse*, posted July 6, 2003 at [http://www.amarillonet.com/stories/070603/tex\\_studybigbend.html](http://www.amarillonet.com/stories/070603/tex_studybigbend.html); see also <http://www2.nature.hps.gov/ard/bravoc>.

205. ENVIRONMENTAL MANAGEMENT ON NORTH AMERICA'S BORDERS, *supra* note 77, gives both the historical overview and a number of interesting examples from recent years.

Frequently, state and local governments, private parties, and nongovernmental organizations have contributed to international arrangements and have worked out their own solutions to local and regional problems. A notable example of this latter pattern is the amelioration of serious air pollution in the airshed of El Paso–Ciudad Juárez under an arrangement inspired by local business and civic leaders and a national environmental organization, subsequently supported by state governments and formally approved by the national governments.<sup>206</sup> Energy planning and development in southern California and Baja California would be a much larger undertaking, but some of the necessary social infrastructure for international cooperation already exists as a foundation on which to build a more ambitious effort. Only the political will of the relevant public and private parties in the region is needed.

### CONCLUSION: MAKING SYMBOLS INTO REALITY

NAFTA has always been about more than the free trade mechanics of removing tariffs on trade within the continent. As a Mexican commentator recently put it:

For Mexico: the fundamental objectives were to reduce the vulnerability and uncertainty for its exporters in order to promote external sales, to increase investment flows, and to elevate job creation. At the same time, NAFTA, together with other international commitments such as the GATT and [the Organization for Economic Cooperation and Development], assured, for potential investors, the sustainability and permanency of the market policies undertaken in the late nineteen-eighties and early nineteen-nineties.<sup>207</sup>

Immutable circumstances of geography and history bind the continent together, but give each country its unique identity. Ecological linkages connect the Mexican tropics with the Canadian Arctic.<sup>208</sup> Long land borders are active points of connection, yet divide landscapes and people. The cultures and politics in all three countries were forged from the tension between Old World heritage and colonial ambition on the one hand, and the inventive, physically demanding, often brutal experience of the New World on the other. Those tensions played out and resolved in distinctly different yet compatible patterns in each

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206. Emerson et al., *supra* note 77.

207. Juan Rebolledo Gout, *In Search of an Understanding With the United States*, 30 DENV. J. INT'L L. & POL'Y 63, 66 (2001).

208. The CEC has a substantial program on the conservation of biodiversity, including birds, terrestrial species, marine species, grasslands, and other shared ecosystems. See generally [http://www.cec.org/programs\\_projects/conserv\\_biodiv/index.cfm?varlan=english](http://www.cec.org/programs_projects/conserv_biodiv/index.cfm?varlan=english).

country.<sup>209</sup> The three neighbors have interacted with each other in significant ways (both hostile and friendly) for the last two hundred years. Since 1994, though, each new connection in the latticework of relationships is refracted through the NAFTA prism, now the most potent symbol of the mutual but unquestionably incomplete commitment of the governments of the continent to the deepening ties among their three countries.

It is precisely NAFTA's incompleteness that makes it so controversial. It deliberately embraces the integration of commerce while keeping people, and politics in traditional patterns of separate sovereign nationality. But the implications of the commercial integration refuse to stay within the bounds of commerce, spilling over in messy ways into social, political, cultural, and environmental realms.

The tremendous growth of the U.S.-Mexican border area began in the 1970s and continued through the 1990s, spurred in significant part by Mexico's *maquiladora* program. Due to many factors, including the centralization of politics and power in Mexico, the border region lagged during these decades in providing the social and physical infrastructure to support expanding populations of workers, increases in vehicular traffic, and rising volumes of industrial and residential waste. Descriptively, the NAFTA counterstories against *maquiladoras* paint a harsh but not inaccurate picture of the result. Wages in most *maquiladoras* are low, working conditions are often wretched, and employers take advantage of unempowered young migrants from the rural areas. Decent and affordable housing in border cities is scarce, prices for goods on the open market are relatively high, and crime and corruption seem to be endemic. The air is heavily polluted, sewage treatment is scarce, and toxic materials contaminate soil and blow into the air or run off into waterways. Although the *maquiladoras* pre-date NAFTA, the media and public "discovery" of them during NAFTA's negotiation caused "*maquiladora*" to connote social and environmental problems along the border.

As argued in Part II, though, NAFTA is merely a scapegoat with respect to *maquiladoras*, and the solution to these many ills does not lie in the surgical removal of NAFTA. Renegotiating, or even rescinding, the Agreement would make little difference to the number or type of *maquiladoras* in the border area. Especially after January 1, 2001, major legal or regulatory determinants of business viability for a *maquiladora* lie not in NAFTA but in Mexican laws and

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209. Earle and Wirth argue that "the three North American nations share a *perceptual* heritage, or context, as well as economic regionalism and geography. This context draws on a shared and recuperable liberal tradition, and what we call the 'amplitude of vision' of New World peoples." Robert L. Earle & John D. Wirth, *Introduction* to IDENTITIES IN NORTH AMERICA, *supra* note 41, at 1, 7. They develop some of their argument in greater detail in *Conclusion: The Search for Community*, in IDENTITIES IN NORTH AMERICA, *supra* note 41, at 195 [hereinafter Earle & Wirth, *Conclusion*].



regulations on customs treatment for inputs of raw materials, assembled components, and capital equipment. Moreover, as the struggling economies of the last two years have made clear, many foreign firms have options to establish *maquiladora*-style operations outside of North America. The Mexican government, and Mexican society at large, have both the authority and the responsibility to address these conditions. That is not to say that U.S. businesses and government have no role to play, but that their role should be one of assistance to Mexico in implementing its own policies—whether with technology, training, finances, or appropriate adjustments to U.S. policy. I agree with those who point out that the United States has been derelict in fulfilling these obligations. This is not the fault of the trade promoted by the real NAFTA, but illustrates a broader pattern of U.S. relations with Mexico symbolized by NAFTA, in which both governments freely promote private economic activities across the border but are reluctant to relinquish sovereign prerogatives or to confront entrenched attitudes and power structures.

The eruption of energy—electricity in particular—as an issue connecting “Alta” and “Baja” California even more vividly illustrates the phenomenon of largely unchecked commercial integration in a vacuum of administrative responsibility and political coordination. It is fair to say that cross-border transfers of electricity and other energy were clearly foreseen in the text of NAFTA, and that the negotiators deliberately built into the agreement special provisions with respect to energy, but those provisions primarily allow Mexico to maintain its historic limitations on foreign direct investments and operational control of energy production and sale. Neither NAFTA itself nor its side agreements establish the kind of social and political infrastructure necessary to provide effective regulation of rampant private energy development to meet growing energy demands on both sides of the border region (which has scarce energy resources of its own).

To say that the national governments and the border communities need to establish entities with the responsibility to devise and implement shared solutions to these shared problems seems unsatisfyingly vague (and perhaps naïve), but there is no alternative. For NAFTA to succeed as a symbol of the benefits of liberalized exchange and as a rejection of autarkical separatism, integration of administration, law, and political decisionmaking across the border must begin to approximate the real NAFTA in transmuting the international boundary from a barrier to an insignificant formality. For border area issues at least, politicians at all levels must begin to think and act in functionally global rather than formalistically territorial terms.

As Robert Gilpin observes: “Governance at any level, whether national or international, must rest on shared beliefs, cultural values, and, most of all, a common identity.”<sup>210</sup> In a similar vein, Robert Bellah has defined a “community”

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210. GILPIN, *supra* note 29, at 402.

as "a group of people who are socially interdependent, who participate together in discussion and decision making, and who share certain *practices* [that] both define the community and are nurtured by it."<sup>211</sup> For all its faults, the postwar European enterprise to form the European Union stands as the lone model of success in a political endeavor to create a transnational community. It has programs that affirmatively seek to cultivate shared beliefs and values, yet even in this model deep anxieties and political resistance by various nations persist. Whether such a transformation of attitudes can be induced on the North American continent, and how long it will take to forge a "common identity," are deep questions as to which there are no ready answers. It is beyond question, though, that the historical ties between the border communities of Mexico and the United States—given new depth by the real NAFTA—call for an affirmative transformation of the symbolic NAFTA as well.

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211. Earle & Wirth, *Conclusion*, *supra* note 209, at 198 (citing ROBERT N. BELLAH ET AL., *HABITS OF THE HEART: INDIVIDUALISM AND COMMITMENT IN AMERICAN LIFE* 333 (2d ed. 1996)).