

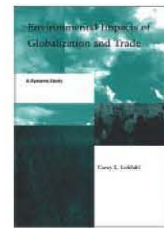
REVIEW ESSAY

Lateral Pressure and Deforestation

Andrew K. Jorgenson

Lofdahl, Corey L. 2002. *Environmental Impacts of Globalization and Trade: A Systems Study*. Cambridge, MA: The MIT Press. 253 Pages, ISBN 0-262-12245-6 (Cloth). <http://mitpress.mit.edu>

What are the effects of increased structural integration of international trade on the environment of relatively poorer countries, particularly in the southern hemisphere? This is the key question addressed by Corey Lofdahl in his book *Environmental Impacts of Globalization and Trade: A Systems Study*. Given the theme for this special issue of the *Journal of World-Systems Research*, a discussion and evaluation of this book seems rather timely and relevant. An immediate fact of interest is that Lofdahl is not an environmental sociologist, let alone acquainted with relevant empirical works grounded in a world-systems perspective. Rather, he is trained as a political scientist, and works in the simulation and information technology sector.



This book uses lateral pressure theory analytically and a variety of methodological steps (GIS, time-series, multivariate analysis, simulation modeling) to test how and to what extent the aforementioned theory in an expanded form explains the effects of international trade on environmental outcomes, more specifically deforestation in relatively poorer countries. The text consists of six chapters and a series of appendices that contain more in-depth discussions of the methods and data included in the analyses. Below I offer critical summaries of each chapter in succession, followed by a brief evaluation of the text.

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Chapter one begins with a discussion of the recent protest events in Seattle during the WTO meetings, currently a relatively common topic among social scientists. Lofdahl, like many others, explains that the protesters in Seattle were not against globalization, but rather protesting the harmful effects inflicted by it on the global environment and poorer disadvantaged populations around the world. Economists argue that free trade helps “developed” and “less-developed” nations grow economically while environmental and social justice groups maintain that increased unregulated trade caused by globalization decreases regional labor standards and environmental conditions in “less-developed” countries at the expense of the more “developed” countries’ interests. Simply, protestors maintain that trade and globalization hurts human well-being and the environment, a direct contradiction to economists, which generally believe that trade helps communities develop and the environmental outcomes are justified. This debate is nothing new to the social sciences, especially macrosociologists.

Another common topic in related areas of literature is definitional discussions regarding what we really mean by the term globalization. Lofdahl immediately takes part in this dialogue by offering a definition, which he operationalizes in this study. His definition is of the structural integration sort, rather similar to that offered by Chase-Dunn et al. (2000, 2002), with a focus on trade while clarifying that it also refers to other variations of international interaction. Following this definitional clarification, two additional areas of literature are reviewed from a political science perspective: (1) politics and markets, and (2) geopolitics and power. During the latter, Lofdahl briefly mentions Wallerstein’s early (1979) notions of the core and periphery, but misinterprets their hierarchical and relational characteristics by equating them to horizontal concepts that connote spatial differentiation among geographic units of similar scale (pg 21). This leads to the greatest weakness of the book, whether intentional or unintentional: an almost total neglect—with the exception of this misinterpretation—of references and connections to areas of relevant political-economic, political-ecological, and environmental sociological literatures. However, this shouldn’t entirely discount its methodological contributions as discussed below, but it does cloud them up a bit.

Chapter two provides a description of lateral pressure theory (LPT), the theoretical framework applied to a series of analyses in later chapters. This framework argues that as states develop economically and their populations increase, they make demands on international resources, called lateral pressure, and these demands lead to an increase of military force and the likelihood of warlike conflict. Lofdahl attempts to extend LPT with the intention of capturing the international-level, systemic interconnections that contribute to global environmental degradation (pg 45). More specifically, in this text LPT is used

to account for the expansive behavior of multinational corporations acquiring worldwide market share after World War II, which leads to the focus on international trade, and moving away from state centric analyses (pg 49). In doing so, Lofdahl distinguishes between four interconnected levels of analysis: the individual, the state, the international system, and the global system. Going from top to bottom, global processes effect the international system, which in turn effects the state, and so on. And, going from bottom to the top, the same logic applies.

A primary goal of this study is to explicitly identify a geographical component nested within LPT. The selection of forest change as a dependent variable overlaps considerably with this goal. Forest change, or deforestation, implies a spatially observable and measurable outcome grounded in actual locations, and Lofdahl’s proposition states that the “expansion of the social environment through globalization and trade impacts the natural environment as measured by forest change” (pg 53). In the following three chapters, findings from a series of analyses attempting to test this proposition are reported. Building on one another, they involve different yet complimentary methods.

Chapter three consists of series of geographical and time-series analyses. The geoanalyses, offered in map form, are presented to introduce the primary dependent variable addressed in this text—forest change (i.e. deforestation), and a few related variables of interest, which offer visual descriptions of their spatial distribution. The time-series analyses address how deforestation, GNP, CO₂ emissions, imports, exports, population, and forest change have varied over time.

The geographical analyses illustrate that countries with relatively larger shares of global GNP than population are generally clustered in northern (core) regions while those with more population than GNP tend to be in southern (peripheral) regions. Moreover, most CO₂ emissions are generated in the north, while relatively higher levels of deforestation occur in the south. As accurately stated, we see that global-scale data can be displayed in geographical units other than states (pg 77), particularly of relevance for natural endowments, which do not correspond with geopolitical borders. These visual descriptions are rather effective, especially for world-systems oriented scholars generally bound to cross-national data. With this mapping approach, one can create visual images that identify the world-systemic—as well as international—contours of certain kinds of conditions, especially environmental and ecological. Lofdahl undoubtedly illustrates how this methodology improves the descriptive power (at least) of these kinds of empirical studies. Other recent cross-national analyses of deforestation (studies that Lofdahl does not address) would greatly benefit from the incorporation of this methodology (e.g. Burns, Kick, Murray and Murray 1994; Kick, Burns, Davis, Murray and Murray 1996; Ehrhardt-Martinez 1998; Jorgenson 2002).

Time-series analyses are performed to establish initial connections and correlations among the set of variables listed above over a period of time. Results are what one familiar with relevant studies would expect, and offer additional support for the geographical analyses. Lofdahl identifies GNP as a proxy indicator for technology, stating that “technology here represents the sum of applied knowledge and skills, both mechanical and organizational...in other words, technology consists of the means whereby humans transform and use nature for their own benefit, a process that includes but is not limited to nature, people, competition, and economics” (pages 79–80). I consider this application somewhat problematic for the following reasons. First, and most importantly, GNP per capita is a more accurate indicator of affluence (Dietz and Rosa 1994), development (e.g. Burns, Kentor, and Jorgenson 2003; Jorgenson and Burns 2003), a proxy for consumption (Wackernagel et al. 2000; York, Dietz, and Rosa 2003; Jorgenson 2003), but not technology. More appropriate indicators of technology include GNP per worker, or proportion of total GNP in service (Dietz and Rosa 1994; York et al. 2003). Granted, all three are relatively highly correlated, but not identical. Second, Lofdahl fails to discuss how GNP partly measures relative power between countries in the world-economy (Chase-Dunn 1998; Kentor 2000). Moreover, he lumps all countries into two categories, “developed” and “less developed,” which hides the heterogeneity in the non-core between more peripheral and semiperipheral countries, and within the semiperiphery itself (Chase-Dunn and Hall 1997; Chase-Dunn 1998).

Chapter four contains a series of bivariate and multivariate statistical analyses that address causal relationships between variables explored in the previous chapter. Rather than performing and reporting a simple test of correlations, Lofdahl provides results of bivariate regression analyses which test the effects of (1) GNP per capita on CO₂ per capita, (2) population growth on CO₂ per capita, (3) population growth on forest change, and (4) GNP per capita on forest change. Findings indicate that all regression coefficients are statistically significant, but coefficients of determination (R^2) are not reported in the body of the chapter. A simple analysis of correlations between these variables would be just as effective and easier to follow.

In the second part of chapter four, Lofdahl develops an indicator similar to import or export partner concentration,¹ but takes it a step further. The new indicator, “trade connected times GNP” (TC x GNP), generates a value that

¹ Partner concentration refers to the percent or proportion of total exports or imports to a country's largest trading partner (Kentor 2000).

depends both on the amount a country trades with its partner and the size of that partner's GNP (pg 119). Mathematically, it is calculated by cross-multiplying trade connections (proportion of a country's total imports or exports) with the GNP of each associated trading partner, and then summing these values. Lofdahl constructs this index for both imports and exports, but focuses on imports in the reported multivariate analysis.² He considers this index to be an international variable whereas variables such as GNP per capita and population growth are domestic indicators.

While I consider this new indicator to be a **critical** empirical and methodological development for the social sciences, the use of total GNP instead of or in addition to GNP per capita is problematic. Lofdahl sates that GNP per capita is not included because “it matters little whether a trading partner's large GNP is due to high technology and low population or low technology and high population” (pg 119). This justification, coupled with his justification for treating per capita GNP solely as an indicator of technology illustrates a limitation of this study. Many of the relatively poorest (per capita wealth) countries in the world contain higher total GNPs than some of the relatively wealthiest countries (per capita wealth). Per capita wealth (GNP or GDP), which is highly correlated with a country's relative position in the core-periphery hierarchy, is also very highly positively correlated with per capita consumption, and negatively correlated with deforestation (Wackernagel et al. 2000; York et al. 2003; Jorgenson 2002, 2003; Broswimmer 2002). At minimum, both total and per capita GNP should be included, meaning the construction and analysis of two trade-connected indicators.

This leads to a multivariate analysis in which forest change is regressed on (1) TC x GNP, (2) GNP per capita, and (3) population growth. All three regression coefficients are statistically significant, with TC x GNP's effect on forest change the strongest (negative), followed by population growth (negative) and GNP per capita (positive). In sum, while increased GNP per capita leads to forestation, higher trade connectedness with partners with higher GNPs, and relatively higher levels of domestic population growth lead to relatively higher levels of deforestation. Thus, deforestation is a function of both domestic (GNP and population) and international (TC x GNP) factors. Although the development and incorporation of this new indicator is an advance for empirical work concerning environmental outcomes, Lofdahl's multivariate analysis particularly

² Lofdahl explains in an endnote (43) that the results for imports and exports are almost identical due to the high correlation between the two.

illustrates the key limitation of this book, resulting from the neglect of other relevant studies of deforestation (e.g. Burns et al. 1994; Kick et al. 1996; Ehrhardt-Martinez 1998; Jorgenson 2002). These other analyses illustrate that the current model, which specifies three independent variables, is too parsimonious. For example, deforestation may result from three types of dependency: export/trade dependency, debt dependency, and foreign capital penetration (Ehrhardt-Martinez 1998). Hence, the greater the rate of dependency on core countries, the greater the rate of deforestation. Dependency indicates that high levels of domestic inequality will result in increased levels of deforestation as the rural poor become increasingly impoverished, rely more heavily on forest resources, and search for nonagricultural activities to supplement or replace their agricultural income (Ehardt-Martinez 1998; Jorgenson 2002).

Empirical findings also suggest that deforestation is most severe in semiperipheral regions (Burns et al 1994; Kick et al 1996; Jorgenson 2002).³ Population growth has a positive effect on deforestation in all regions of the world-economy, but its effects are intensified in the semiperiphery (Kick et al. 1996). However, rural population growth is a better predictor than total population growth. Increased urbanization in semiperipheral regions causes landless workers to migrate out of urban areas into forested regions, a process labeled rural encroachment (Burns et al. 1994). Moreover, landless workers contribute to deforestation through their limited knowledge of agricultural practices (Burns et al. 1994). Semiperipheral countries tend to have lax environmental policies and because of the potential for economic development are more eager to reap the perceived economic benefits of deforestation than core countries (Smith 1994; Bergesen and Bartley 2000). On average, these countries possess greater technological capacities to deforest than peripheral regions do (Kick et al. 1996).

International trade in forest products is another factor effecting deforestation. Core countries are able to export forest products without high levels of deforestation because they often possess the means and technology necessary for reforestation practices (Kick et al. 1996). In semiperipheral countries, both the import and export of forest products impacts deforestation (Kick et al. 1996). Exportation of forested products increases deforestation due to the lack of reforestation practices. Importation of forest products is an indicator of infrastructure building and development, which increases deforestation directly through land acquisition and development (Kick et al 1996).

³ However, Tom Burns, Edward Kick, and Byron Davis have found that levels of deforestation are increasing in the periphery relative to the semiperiphery—at least in the last decade (see their article in this special issue).

Like Lofdahl, these other empirical studies include GNP per capita and population as independent variables. However, by themselves they potentially elevate the effect of the newly constructed indicator of trade connectedness. To adequately test this indicator's effect on deforestation, an analysis should control for the additional factors discussed above. Furthermore, population needs to be specified in both urban and rural, and considering the robust evidence concerning higher levels of deforestation in the semiperiphery, Lofdahl's "less developed" category needs restructuring. Since his analyses are not grounded in a world-systems perspective, a simple solution might include the incorporation of a "middle income" (GNP per capita) dummy variable.

In chapter five a series of simulation models are presented that "provide a link between the systemic assumptions and dynamic responses necessary to explain the preceding time-series and statistical analyses" (pg 136). The final model, labeled the environmental lateral pressure model (ELP), incorporates the three key factors of interest throughout the book: population, technology (measured as GNP per capita), and resources (measured as forest change). Moreover, model feedback loops are applied to help make sense of the "transition from a system's microfeatures to its macrobehavior" (pg 141).

This study argues that trade provides a mechanism by which the costs of industrialization are pushed off by rich countries onto poor ones (pg 157). The ELP model in its presented form supports this argument. It depicts the developed northern countries exporting technology and high value goods to southern relatively poorer countries, while the latter export natural resources to the former. These relational characteristics create asymmetric outcomes: relatively higher economic development and a healthier environment for northern countries, and economic underdevelopment and increased environmental degradation for southern countries. Overall, findings are supported by the literature reviewed in earlier chapters, not to mention the neglected sociological areas of literature concerned with the "global treadmill of production" (e.g. Schnaiberg 1980; Schnaiberg and Gould 1994) and the "Netherlands fallacy" (e.g. Ehrlich and Holdren 1971; York et al. 2003; Rosa and York 2002; Jorgenson 2002, 2003). The level of sophistication involved is quite impressive and the analyses illustrate the utility of simulation modeling for studying global-level phenomena while paying attention to different levels of analysis. However, the underspecification of the multivariate analyses in chapter four also seriously impacts the simulation models developed here. Like chapter four, one must applaud Lofdahl's methodological efforts and advances but be wary of his empirical findings.

The final chapter provides a brief conclusion of the book's findings, theoretical and methodological contributions, policy implications, and future steps for this research agenda. Each of these sections is well written, offering clear and

concise narratives of the steps taken in the preceding five chapters. Policy implications discussed are rather reminiscent of recent empirical works that challenge the environmental Kuznet's curve (Grimes and Roberts 1995; Roberts and Grimes 1997) and dependency and world-systems perspectives that challenge modernization theory's approach to domestic development.

In summary, Lofdahl attempts to expand and operationalize lateral pressure theory to better explain if and how international trade impacts the environment. Using a series of complementary geo and statistical methods, empirical findings suggest that trade does impact the environment—in this case forested areas, particularly for southern countries with relatively lower levels of per capita GNP, relatively higher levels of population growth, and relatively higher levels of trade connectedness with partners (other countries) that possess relatively higher total GNPs. This book warrants notice due to its application of sophisticated statistical methods and especially the development of a trade connectedness indicator that expands and greatly improves upon trade partner concentration as a predictor of various environmental and well being outcomes, in this case deforestation. With these strengths and contributions comes a general noticeable weakness: the neglect and/or misinterpretation of relevant theoretical perspectives and empirical studies. This is particularly evident in the literature review provided in the first two chapters, and especially the underspecification of the multivariate analysis in chapter four and the simulation models in chapter five. This underspecification potentially biases the reported empirical findings. However, the indicator developed by Lofdahl is a noteworthy advance for studies of various international and world-systemic processes and with slight changes should definitely be incorporated into future relevant analyses. Furthermore, his application of simulation modeling and especially geoanalysis illustrate the utility of these methodologies for all social scientists, and like the new trade connected indicator, their addition to future analyses would be greatly effective.

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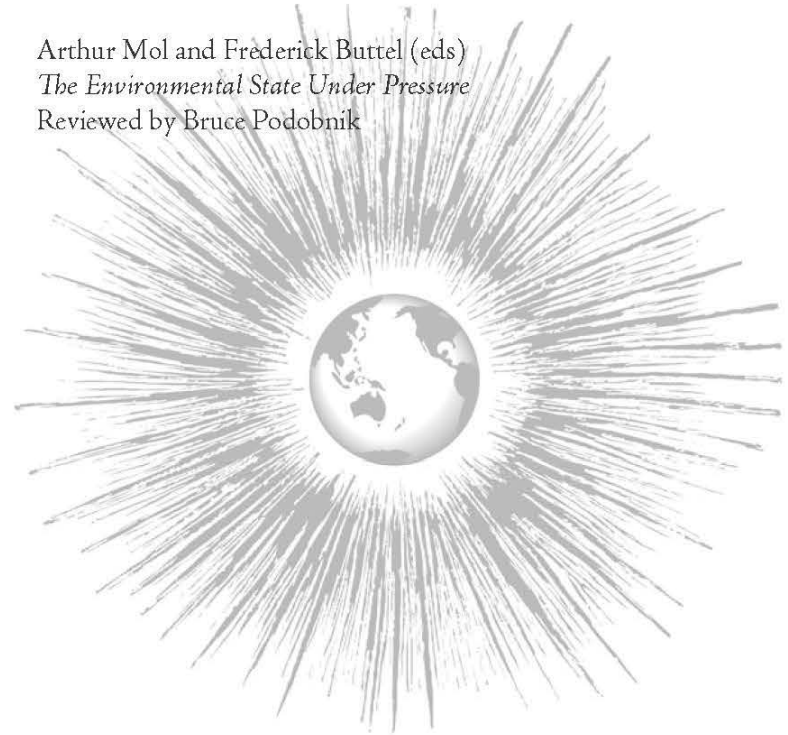
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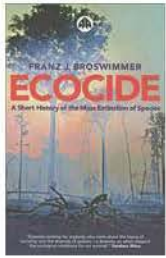
Franz J. Broswimmer
Ecocide: A Short History of Mass Extinction of Species
Reviewed by Florencio R. Riguera

Arthur Mol and Frederick Buttel (eds)
The Environmental State Under Pressure
Reviewed by Bruce Podobnik



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Brosimmer, Franz J. 2001. *Ecocide: A Short History of Mass Extinction of Species*. London: Pluto Press. 204 pages, ISBN 0-7453-1935-1 (cloth), ISBN 0-7453-1934-3 (paper). <http://www.plutobooks.com/>



Ecocide calls attention to the threat of unsustainable relationships between humans and the environment, and argues for the need to respect the limits the carrying capacity of the latter imposes. Humans depend on the environment; and degrading it is ultimately harmful to them. The book employs an interdisciplinary approach—utilizing materials from both the natural and the social sciences. It thus covers a broad range of mechanisms that have environmental degradation among their consequences. This brief story of mass extinction of species comes through with illustrative cases of societies in antiquity that ended up overshooting the carrying capacity of their environment.

However, Brosimmer correctly focuses on the fact that environmental conditions result from the actions of human populations in different areas of the globe in different periods. He shows that the current trend of accelerated mass extinction and loss of biodiversity is traceable to the capacity of humans for culture (that is, intelligence and language) along with the emergence of the system of capitalism. Intelligence and communication made learning feasible and enabled societies to solve their problems. But the experience also led to an attitude that held the environment as an unlimited resource. Under capitalism, resources would be utilized to realize profit, and the tendency was to externalize costs.

This drives the point that actions of human populations are socially organized. To understand the link between said actions and environmental degradation, one needs to look into the goals earlier societies pursued; the implements or technologies they employed; or the division of labor they followed. These can serve as the backdrop against which one may appraise the current environmental situation. The consequences of human actions in terms of environmental degradation may not be disregarded.

These actions need not directly intend to destroy a human ecosystem—Brosimmer extends the understanding of “ecocide” so that it includes actions or arrangements that as much as allow or just facilitate environmental degradation. This broadened understanding is useful for identifying decision points as well as for constructing a discourse in dealing with the human-environment relationship. The task is to ensure a balance between resource utilization and sustainability. There is a trend of accelerated mass extinction of species and loss of biodiversity—*Ecocide* provides tables of data that illustrate likely trajectories

toward environmental degradation. Nevertheless, there is hope. The impending catastrophe can be averted if societies devise and implement measures that respect the environment. And these measures are very likely to impact current patterns of production and consumption. More importantly, the measures would also entail a revised understanding of interest between societies on the globe.

In the present global context, it is necessary to take into account the operations of large transnational corporations, which have the ability to influence policies or arrangements between nation-states. These have an effect on the trading of new products to other populations, or, on the dumping of toxic waste somewhere in the environment. Through policies traceable to nation-states, poorer nations can be pushed to exploit their resources—with costs to the environment—say, in efforts to repay their debt. Mechanized warfare is another factor that deserves attention. The use of toxic materials to pursue military objectives can jeopardize non-combatant populations in the long run. Of course, destruction of the environment on which the opposing side depends for its resources can be directly intended in warfare. In addition, because of the inherent competition between nation-states for dominance in the global arena, *Ecocide* contends that the system of nation-states ultimately have harmful effects on the environment.

However, when *Ecocide* offers the alternative of ecological democracy and visualizes an equitable global commons to avert human-induced ecocide one can raise questions on the feasibility of implementing the proposed vision. Under ecological democracy, individuals and communities must participate in the formulation of measures/policies that affect their lives, and their participatory rights must be safeguarded. Humans must also take into account the interest of other creatures—a view that opposes treating the environment simply as a resource. The book rightly recognizes the role of social movements in exposing otherwise invisible mechanisms that lead to environmental degradation. But social movements usually articulate their claims ultimately to nation-states. And when they succeed in persuading communities or publics, the latter are expected to influence the policies managed by nation-states. Hence, the system of nation-states is not willy-nilly harmful to the environment—it is a matter of crafting and implementing appropriate policies.

The project of an equitable global commons also needs the participation of nation-states—at least, in the interim. The current debate on the patenting of indigenous knowledge calls attention to differences in power between nation states. When an alternative system of governance is in place, there will still be the issue of whether or not developing nations must follow the path taken by the developed nations. Brosimmer sees some solution in less-damaging technologies going from the developed nations to developing nations. This apparently does not question the benefits of technological development. Nevertheless, one

can ask—what of ideas going the other direction? When the developing nations participate in ecological democratic processes, is there no possibility that views and values from the periphery could offer a critique of some of those in the core? Questions like these can put the ratchet-effect in relation to what levels of efficiency or comfort populations in the developed countries might not be willing to part with.

If a sustainable environment should have a role in the devising of ways to guide human populations in dealing with their immediate environment it is inevitable to have an understanding of how other populations would like to deal with their own immediate environment. The developed nations wield considerable power in the design of global arrangements. But it is important to ensure that the substance of these arrangements promote goals that take environmental linkages into account. The project is one of choosing what goals to pursue in a global context—and how to define these goals in a shared environment.

Ecocide organizes a huge body of current information and perspectives on the environment. It links various discourses to the problem of an impending ecocide—broadly understood. And it candidly drives home the point of a long-term perspective is imperative to arrest the trend toward ecocide. It brings to the foreground the underlying complex links through which societies end up degrading the environment. Its theme and its message are persuasive and easy to grasp. Brosimmer thus provides a useful educational tool in *Ecocide*.

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The last thirty years have witnessed the rise and partial demise of state-based efforts to protect the environment at local, national, and international levels. As described in the useful collection of articles published in this volume, the 1960s witnessed the emergence of agencies within core nations as well as within some nations in non-core regions that were endowed with broad legal and regulatory authority to protect specific ecosystems from irreparable degradation. Since the 1980s, however, these 'environmental states' have come under sustained attack, first by individual governments that pushed deregulation and market-based

regulatory approaches, and then by pressures exerted by corporate forms of globalization. As demonstrated in *The Environmental State*, the result has been a general weakening of state-based efforts to protect ecosystems.

The volume examines the new challenges facing the environmental state by gathering together a diverse set of theoretically-driven or case-study analyses. In many respects, the strength of the volume lies in its theoretical and geographic heterogeneity. The volume begins with chapters that sketch out two different theoretical interpretations of the shifting fortunes of the environmental state: the treadmill of production approach (summarized in the book by Schnaiberg, Pellow, and Weinberg), and the ecological modernization perspective (summarized by Mol and Spaargaren). These chapters highlight the divergent lessons that can be drawn from recent changes in the efficacy of state-based approaches to environmental reform. Whereas the treadmill of production perspective argues that capitalist states have never sufficiently prioritized ecological sustainability, the ecological modernization maintains that possibilities exist to construct states that are supportive of both market accumulation and ecological protection. A number of the analyses that follow these opening essays touch, explicitly or implicitly, on this debate between more and less dire interpretations of the relationship between markets and ecological degradation. The subsequent chapters also find authors drawing on theoretical lessons from Habermas, Giddens, and Foucault to interpret the changing nature of the environmental state.

In addition to its theoretical diversity, the volume does an impressive job of presenting analyses from across the world. Chapters address the evolution of state-based environmental policies in the United States, Finland, Portugal, the Netherlands, Cameroon, Tanzania, China, Thailand, Vietnam, and Russia. Of particular interest is the chapter by Jokinen, which explores the emergence of the 'suprastate' of the European Union and its impact on environmental policy making in Finland. Here we have an opportunity to see how the consolidation of a regional political authority is influencing policies carried out within a specific nation. All of the case-studies are richly detailed, and raise intriguing questions about the viability of state-based environmental regulation in this era of advancing markets and corporate-driven forms of globalization. World-systems scholars will particularly appreciate this volume for its extensive treatment of events in the non-core world.

While *The Environmental State* provides an impressively diverse set of chapters, the editors make little attempt to draw general lessons from their broad collection of studies. The introductory chapter by Mol and Buttel highlights key dilemmas facing state-based approaches to environmental regulation, and briefly reviews the articles in the volume. The editors point out that the case studies do not try to verify or falsify the treadmill of production or ecological

modernization perspectives; instead, the authors in the volume show the partial relevance of each approach. There is no concluding essay either, which would certainly have been useful in placing the various cases into a broader perspective. The message that emerges from the volume by default is that complex dynamics are taking place in locales across the world, and that the environmental state is being undermined by a variety of different factors. Specific market dynamics are shown to have been partially reformed in certain areas, but market dynamics are also shown to be encouraging ecological degradation in other regions. A stronger concluding position should have been taken by the editors on the extent to which markets can be reformed, through state intervention, on local, regional, and global levels.

Readers schooled in the world-systems perspective are likely to be left with many unanswered questions after having read this collection of studies. Given that virtually every case study demonstrates the declining efficacy of national-level, state-based environmental regulation, what might be a potential alternative? Do the studies as a whole suggest we place our hope in something like a global environmental state that might implement more effective environmental regulation? Or do the studies suggest instead that the national environmental state will continue to wither, and capitalist dynamics will gain further freedom to disrupt ecosystems? Discussion of these large issues would have strengthened what is a still useful and diverse compendium of studies.

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