BOOK REVIEW PERSPECTIVES

Peter Dauvergne, *The Shadows of Consumption: Consequences for the Global Environment*

MIT Press, 2008, 328pp, ISBN: 0262042460

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In 1998, David Crocker and Toby Linden claimed that there had never been a greater need for “society-wide deliberation about appropriate consumption.” More than a decade on, as throughput of materials increases and the local and global consequences of modern-day consumption become ever more apparent, one can only assume they are still waiting. Peter Dauvergne’s latest book, *The Shadows of Consumption*, could be seen as an attempt to trigger that discussion, raising key questions about the environmental and social costs of consumption. Globally, who are the winners and losers with respect to current consumption trends? How and why do consumption patterns evolve as they do? And most importantly, how can environmentalism be transformed and accelerated?

This is a book about the big picture, and Dauvergne, a professor of political science at the University of British Columbia, takes a fresh approach to examining the “environmental consequences of consumption.” Rather than focusing upon the “immediate impacts...on local environments and lifestyles,” as has often been done before, he aims to step back and explore the “environmental spillovers,” the “full resulting global patterns of harm”—what he describes as the ecological shadows of consumption.

The book consists of 24 chapters organized into seven sections: an introduction, five case studies (automobiles, leaded gasoline, refrigerators, beef, and harp seals) and a conclusion. The case studies are thoroughly researched, well written, and filled with informative and entertaining anecdotes. They are used to great effect to, as Dauvergne describes it, peel “away some of the layers of complexities of how and why ecological shadows of consumption form, intensify, and fade.” These case studies are a joy to read—aside, that is, from the sometimes alarming content, which, for example, reveals that over one third of the world’s grain is used to feed livestock rather than people. Ultimately, the case studies illustrate how in an increasingly globalized world, the impacts of consumption are being progressively pushed upon the world’s poorest people, most vulnerable ecosystems, and future generations.

The real meat of this text lies, however, in the introductory and concluding sections. The two initial chapters set the scene, primarily establishing that levels of global consumption are increasing year after year. The global population is set to exceed nine billion by 2050, with most of the expansion taking place in the “developing world,” where new generations are striving for and embracing “developed world” lifestyles. As such, per capita rates of consumption can be expected to continue to rise. While this may have many benefits, Dauvergne argues that the environmental consequences are dire. Why individuals “choose” to consume as they do is given fairly little attention; it is suggested that “need, habit, belief, desire, [and] fear” all play their parts, although, as Dauvergne rightly asserts, “the global political economy determines the ‘options’ as well as guides the collective ‘choices’ of consumers.” Globalization, it appears, has led to the negative impacts of consumption being felt further and further from the point of purchase. While this has been accompanied, in part, by advances in global environmental management, ecological costs continue to be exported to the poor and powerless. Change is occurring too incrementally to avoid extreme risks to many of the world’s ecosystems and billions of its people. Climate change, biodiversity loss, and chemical proliferation all point toward the need to “map particular shadows of consumption in detail—to learn how they are affecting us and why they are advancing or receding.”

In the two concluding chapters, Dauvergne explores the notion that the globalization of environmentalism has failed to slow the ecological cost of consumption. This is partly because proposed solutions have often merely reinforced the neoliberal economic order, and partly because “economic globalization is...diminishing the capacity of activists and states to influence the direction, speed, and intensity of the environmental consequences of consumption.” Dauvergne argues that processes of environmentalism can, and must, be transformed, and describes
how a more “balanced consumption” may be encouraged. The “Balanced Consumers’ section argues that individuals must embrace “cautious consumption.” “Balancing Corporations” outlines the need to discourage corporations from exporting environmental costs and encourages them to embrace a more precautionary principle with regard to new technologies. “Balancing Trade” argues for the need to ensure that “trade and trade agreements do not lower environmental standards.” Lastly, “Balancing Financial Flows” calls for international aid that assists poorer nations in blocking ecological shadows and protecting their environments. While Dauvergne argues that “sweeping reforms to the world order” are necessary, after 23 chapters outlining the dire environmental crisis facing the world, the reforms he suggests seem far from sweeping.

The book shies away from the heart of the argument about modern-day consumption patterns: does sustainable consumption require individuals to consume less, or simply to consume more efficiently? For some, the answer to this question is clear. For example, the United Nations Environment Programme (UNEP) states that “sustainable consumption is not about consuming less, it is about consuming differently and consuming efficiently” (Jackson & Michaelis, 2003). Perhaps this cautious position is partly because, “if limitation of throughput is to be combined with eliminating [global] poverty, the implication is that rich countries’ throughput should be radically reduced” (Lintott, 1998)—clearly an economically unpalatable proposal for the “developed world.”

From this perspective, more efficient consumption is the only way forward. As Dauvergne illustrates throughout this book, this is insufficient on its own, since reductions in environmental harm per unit of output are currently more than outweighed by expanding markets—what Repke (1999) describes as the rebound effect. In the conclusion, however, Dauvergne sets the rebound effect aside, refusing to engage with the prospect that, as unpalatable as it may at first seem, genuine balanced consumption may require dramatically reduced levels of consumption in the “developed world.”

While Michaelis (2000) may be correct that “the ethics of modern consumer society seem to be in many ways at odds with the aim of achieving sustainable consumption,” the world has without doubt come a long way since the 1992 Rio Earth Summit. At that conference, according to anecdote, consumption was not discussed due to “an informal agreement that the Third World [sic] would not raise...[First World consumption] if reciprocally the First World [sic] did not raise the issue of population control” (Miller, 1995). Many years later people are awaken...
The four industries or products (automobiles, leaded gas, Freon refrigerants, and beef) were initially developed to meet specific human needs. The first two examples are interrelated through our need for personal mobility. The third case study, a better refrigerant, was introduced to keep food from spoiling and, later on, to keep people cool on hot days. The fourth illustration highlights a way to satisfy our desire to eat more and higher protein food. Dauvergne traces the history of each of these products as they started small and local, with minimal environmental impact, to their global expansion and current scale of harm. In each case, in their early days these innovations improved the lives of a few people, but are now valued and coveted by billions.

Because the early levels of production were small, the resultant environmental impacts were similarly proportioned. But, as should have been expected, growth of these industries to reach as many consumers as possible (and to yield high profits for the inventors and investors) steadily, but surely, began to have serious (and increasingly global) ecological consequences. Over the century or so that automobiles have been commercially available, we have in many parts of the world plowed the Earth under to build highways and streets. In addition, exhaust from leaded gasoline made the air in urban areas dangerous to breathe and threatened the neurological development of our children (not to mention contributing to global warming from burning oil). The wonderful Freon that made refrigerators safe (earlier units could unexpectedly explode) and kept our food fresh eventually accumulated in the atmosphere to degrade the ozone layer that protects us from harmful ultraviolet rays. In the case of beef, the growing global appetite for hamburgers and steaks is causing the destruction of large tracts of tropical rainforests at alarming rates to graze cattle and raise fodder for cheap production. Furthermore, cattle release huge amounts of methane that rivals the greenhouse effects of automotive carbon dioxide. Deforestation for cattle farming and other agriculture, energy costs to manufacture fertilizers, as well as the burning of fossil fuels for transportation of the fodder and beef products, are among the major sources of greenhouse gases causing our climate to warm at a distressing rate.

Regarding leaded gasoline and Freon, scientific evidence for the harmful effects of these chemicals eventually became public knowledge and civic pressure lead to their banning in the United States and Europe, but only slowly (and still not completely) in less developed countries. I was alarmed to learn how early in the history of these products scientists recognized their harmful nature and how diligently the corporations involved in their production worked to

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This book is about how our quest for economic gain, based on the development of more comfortable and affluent lifestyles, is trashing the global environment in ways that many people do not realize, and at distances from home that we might not easily recognize. I consider myself to be environmentally aware, but was shocked to learn that there is approximately one cow for every four human beings on this planet and that Americans now eat on average 175 pounds of beef each year (basically a person’s own body weight), compared to 50 pounds a century ago. How about the fact that on the order of 60% of the land in Los Angeles County is made up of roadways and parking lots? These figures reinforce my concerns that the natural world that I value is being consumed to smithereens and irreparably altered by the quest for seemingly endless expansion of human prosperity.

There are hundreds of similar facts in Peter Dauvergne’s informative (and alarming) book, The Shadows of Consumption. This volume develops five case studies of how new technologies, when taken to their full extent and with the intent of making vast quantities of money, have harmed, and will continue to harm, the natural world. Dauvergne first exposes histories of the global environmental impact of the automobile, leaded gasoline, refrigeration, and industrial beef from applauded (and seemingly innocent) discoveries to activities with disastrous “consequences for the global environment” (the book’s subtitle). Each of these first four industries has its own unique set of issues in terms of local and global environmental impacts. Yet several common threads reoccur. However, the fifth, the harp seal-fur industry, while interesting, seems out of place, and I address it separately below.

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Michaelis, L. 2000. Sustainable Consumption: A Research Agenda. Report for the Commission on Sustainable Consumption. Oxford: Oxford Centre for the Environment, Ethics & Society.

Miller, D. 1995. Consumption as the vanguard of history: a polemic by way of an introduction. In D. Miller (Ed.), Acknowledging Consumption: A Review of New Studies. pp. 1–52. New York: Routledge.

Røpke, I. 1999. The dynamics of willingness to consume. Ecological Economics 28(3):399–420.

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hide the emerging facts. We are living through a similar crisis with respect to global warming because activities that we are reticent to stop are profitable for business (and ease daily life for consumers). One of the common threads for the leaded gasoline and Freon chapters is how corporations, forced to stop production in the developed world, moved manufacturing and sales to less developed countries with poor capacity to enforce meaningful environmental regulations. In the case of automobiles, as safety regulations and concern for environmental impacts increased in the affluent nations, manufacturers again redoubled their efforts to profit from sales in the developing world. Activities profitable in wealthy countries are having severe environmental consequences elsewhere.

In the above four cases, the global environmental consequences have increased hand-in-hand with an expanding population and an increasing standard of living in developing nations, most notably China and India. In chapter after chapter, Dauvergne stresses how the severity of consumerism’s environmental consequences has escalated as large multinational companies enlarge their consumer bases (and profits) by broadening their operations in poor countries. And here is where I find fault in Dauvergne’s treatment: Why does he avoid tackling head on the importance of controlling human-population growth? The message is subtly embedded in each of his stories, but never highlighted as a root cause of global environmental deterioration.

Dauvergne seems to have held back from explicitly criticizing the interrelationships that link human population size, consumerism, and environmental impact. This is basically the IPAT equation \[\text{Impact} = \text{Population} \times \text{Affluence} \times \text{Technology}\] introduced by Paul Ehrlich & John Holdren (1971). Our society’s inability to deal outright with the issue of human-population control is a sure ticket to our own doom. Dauvergne establishes a framework where he could have easily used to emphasize that the combination of consumption patterns and consumer numbers mandates action. But Dauvergne never brings the message home; instead he emphasizes efforts to increase the recyclability of major products (e.g., cars and refrigerators) and discusses how better land management could reduce adverse effects. He simultaneously admits that these efforts will be futile to combat the negative impacts of widespread automobile use, refrigerator ownership, and increased beef consumption in China and India. In my opinion, even enlightened conservationists and governments are damning our future by their inability—or unwillingness—to explicitly and forcefully deal with birth rates and family size. Chinese government officials have been condemned for coercive population control, but I applaud their brave and unpopular foresight regarding the consequences if human population is not controlled. Unfortunately, it is all too common to avoid bringing up the need to control human-population growth.

So how do we increase concern about the global consequences of too many people wanting too much “stuff”? The general public in developed countries is unconcerned with the growing environmental consequences of modern conveniences that have embedded into our daily lives. In the developed world, people live in artificial dwellings surrounded by human-made contraptions ostensibly designed to make our lives easier, healthier, and more fun, and to increase our productivity. This is what we call “progress.” By contrast, in developing nations, people either want to achieve the lifestyles of their developed counterparts or are simply struggling to survive at any and all cost. The problem for the global environment is that there are now over 6.8 billion people on Earth, all striving for this modern, “stuff-rich” standard of living. So how do we shock everyday developed-country citizens into ecological awareness to where they are willing to change their consumption?

The last of Dauvergne’s five case studies is the harp seal-fur industry. I do not understand his rational for choosing this example instead of cigarettes, pharmaceuticals, minor appliances, air travel, plastics, electricity, tourism, or any number of other products or services that we now count on to support our daily modern lives. Any of the latter has much broader environmental impacts because of the small number of hunters and the specific nature of the hunt. I am a strong supporter of animal rights and do not buy products tested on animals. I have migrated to a mostly vegetarian diet over the past decade as I became aware of the cruelty of industrial agriculture. I abhor the atrocities of this particular hunt and emailed my Canadian friends to complain about it each spring. Dauvergne’s thorough and detailed history of this pursuit from its early days during the 1700s is interesting from a cultural perspective and angered me when I learned that the Canadian government had only recently revived this defunct industry to create jobs. The only common thread with the earlier chapters is the export of the product to developing countries with different cultural values (i.e. China and India) since the sale of the furs is banned in the United States and Europe. I would have thought that taking on a different industry, such as plastics or shopping malls, would have had greater impact on raising the environmental awareness of mostly Western readers.

In summary, this easy-to-read book is filled with examples about how contemporary lifestyles are damaging our planet. The pursuit of corporate, na-
tional, and individual profits, along with our tendency to strive for improvements in our material standard of living and the fact that there are just too many of us, are driving the impending environmental catastrophe. In his book Collapse, Jared Diamond discusses societies that succeeded by changing course once they realized the consequences of their lifestyles. However, most of that book is filled with examples of societies that failed because people did not recognize the environmental consequences of their actions. Another recent volume, Hot, Flat and Crowded by Thomas Friedman, pulls together additional perspectives on how increasing global population, together with global trade, is leading to environmental ruin. Both of these books try to end on an optimistic note, giving hope that we can change our collective behaviors in time. However, watching how we deal with the human-population issue and the present global economic crisis—which is basically the result of overconsumption (and too much debt) at many levels, corporate greed, and government laissez faire—does not give me confidence that we know how to rise to such challenges. If buying more stuff is the only way to “get our economies growing again,” we will die buried in the consequences of our consumption. We need a new global social ethic and a new economic theory that is not based on consumption growth.

About the Author

Alina M. Szmant is Professor of Marine Biology in the Center for Marine Science at the University of North Carolina, Wilmington. She is a coral-reef ecologist and coral physiologist whose current research focuses on the effects of climate change (ocean warming and ocean acidification) on the early life stages of Caribbean reef corals. Alina has also been collaborating with molecular geneticists to help develop genomics tools to study how elevated seawater temperatures disrupt embryonic development. Recent articles are being published in Global Change Biology, Coral Reefs, and Biological Bulletin. She is a member of the SSPP editorial board.

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Rejoinder from the author

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I am indebted to Alina Szmant and Foye Hatton for their astute reviews. It is heartening to see both respond so positively to the core ideas, arguments, and writing style of The Shadows of Consumption. I see this book as one step in a long journey of learning about the “problem of consumption” that began as a boy jigging for cod off the coast of Nova Scotia. Responding to such perceptive feedback is a real privilege: an opportunity to refine my thinking and develop new questions.

Szmant quite rightly prods me to justify further my choice of Canadian seal products as one of my case histories from the hundreds of thousands of possibilities. Why not plastics cigarettes, tourism, or air travel, she asks. Such industries, after all, are more comparable to the book’s other cases—and would do more to raise “the environmental awareness of mostly Western readers.” One reason, I should admit, was a curiosity arising from childhood memories of local fishermen heading off each spring into a storm of protestors demanding an end to the “brutal” and “inhumane” hunt for “baby” harp seals. But I primarily chose sealing because it is at the periphery of the world economy and because seal furs are a luxury item with relatively easy substitutability. I wanted to explore how the consumption of products with small political economies and many substitutes might, or might not, differ from core products. I saw this as essential for a more comprehensive understanding of the forces driving global consumption patterns given that together thousands of such products combine into big global consequences.

I accept Szmant’s point, however, that except for the analysis of sealskin exports to Russia and China since the mid-1990s, the history of consuming seal products does not weave as easily as the other cases into the book’s common themes around the role of multinational companies, powerful states, and growing global markets. Still, I do think the history of consuming harp seals opens many new insights into how and why global consumption patterns shift. For one, the analysis of the global campaign to close Canada’s seal hunt—with success in the 1980s and failure since the mid-1990s—helps reveal globalization’s contradictory consequences for activists’ emotional and moral appeals to consumers. No doubt the globalization of communication technologies is allowing more activists from more places to reach more people faster. Yet, as the recent emergence of markets in China and Russia for seal products shows, at the same time the globalization of markets is making it harder and harder for increasingly diverse activists to outflank corporations and government agencies and reach enough people across enough cultures to achieve lasting change.

Szmant wonders further, given my analysis and conclusions, why I do not tackle “head on the importance of controlling human-population growth” as
a “root cause of global environmental deterioration.” Rising population, as she notes the book reveals, is aggravating many consequences of consumption for just about every consumer product. Still, I intentionally kept my spotlight on rising consumption, not rising population, as the root cause of the global environmental crisis. For me, the crises of climate change and deforestation and collapsing fish stocks are symptoms of a consumption crisis, not a “population bomb.” Pointing to rising consumption as the root cause raises the stakes, challenging something far more insidious and difficult to stop than rising populations.

Unlike population growth, consumption is embedded in societies as innately good, as something to increase for community welfare, to grow economies out of recessions and into prosperity. Few national leaders, for example, are calling for measures and policies to increase birth rates, and some, as in China, are imposing controls to reduce them. Yet, everywhere, leaders are working hard to increase consumption—from incentives to trade-in big ticket items like automobiles to speeches that tell citizens it is patriotic to borrow and buy. So strong is the faith in the value of rising consumption that almost no one in power ever calls for less. In such contexts, pointing to population growth as the cause of environmental problems can even deflect attention from consumption so that, for instance, the “solution” to freshwater shortages in the United States becomes closing borders to migrants rather than reducing industrial and personal consumption of freshwater (not, I should stress, what Szman argues, or even hints at).

Furthermore, reducing population will do little to resolve the global environmental crisis if current consumption patterns deepen. Granted, reducing the global population to 4 billion people—or more drastically 1 billion people—would make this task easier. Yet only a truly horrifying pandemic will achieve this end. Realistically, even a global one-child policy, which as China shows would surely cause family pain and social distortions, would only bring the world population down slightly. And, as a glance at today’s China shows, there is no guarantee that governments will not ramp up production to grow economies of higher-consuming smaller families. Demographic trends suggest the era of exponential population growth is now set to end around the middle of this century. For me, the key is to start now to find ways to ensure that these 9-10 billion people are consuming smarter and consuming less natural capital as a population than today’s 6.8 billion consumers. Such a world will then need to ensure economic and social stability as the global population inevitably declines as people with more opportunities choose to have fewer children.

To address the problem of consumption SZMANT persuasively calls for a “new global social ethic” and a “new economic theory that is not based on our consumption growth.” Otherwise, as she succinctly says, “we will die buried in the consequences of our consumption.” I could not agree more. I conclude The Shadows of Consumption with the purpose of beginning a conversation about how to move toward more balanced consumption, both for individuals and the global economy. I note the value of individuals changing lifestyles: reducing, reusing, recycling. But I stress the vital importance of going beyond the individual to transform and control the systemic drivers of current consumption patterns, such as multinational corporations, trade, investment, technology, and globalization. As Hatton correctly observes, however, such reforms “seem far from sweeping.” I do not call for a revolution to overthrow capitalism, and I still see considerable value in transforming current institutions.

Nevertheless, getting institutions to change fundamentally will require sweeping away many of the old assumptions and goals underpinning them. Doing so, however, is far from easy, and, after finishing The Shadows of Consumption, I was personally still unsure where to start.

As the book was in production at MIT Press, I decided the logical place to begin was my own institution. Universities and colleges are especially well suited to act as sustainability leaders, innovating, researching, and advancing our understanding of effective ways to reduce consumption and increase well-being. The underlying motives for universities are primarily students and research: money of course matters, but not to the same degree as with most of the other institutions driving consumption growth (universities are also, of course, a big reason for the problem of consumption). Thus, transforming a university into a model of sustainability—from teaching to research to operations—has the potential to influence the actions of individual consumers as well as to cascade change through the global system by demonstrating best institutional practices and educating future leaders.

In July 2008, I joined a team to try to do just that at the University of British Columbia (UBC), working full time as Senior Advisor to the President. Many colleagues were surprised that I was willing to step away from the joys of teaching and writing. However, this decision arose directly from my conclusions in The Shadows of Consumption. If I was not willing to help transform my own institution, how could I ask others to do so for more intransigent institutions, such as multinational corporations and trade regimes? Very few academics can say their time in central administration was inspiring. Yet in
my case, although our committees have hit—and I’m sure will continue to hit—many rocky shoals of politics and cynicism, we were able to place sustainability at the centre of UBC’s new strategic vision.

Our plan, with the admittedly stuffy title of “Sustainability Academic Strategy,” rests on three interrelated reforms for teaching and learning, research and partnerships, and operations and administration. To bring these together, UBC will pursue two pathways. The first will develop the university as a “living laboratory,” integrating students and academics into efforts to research and change our operations. So, for example, among our many goals is to move quickly toward a net positive energy and water campus, where UBC is “producing more energy on-site than is consumed and returning water to the municipal system cleaner than when it was removed” (18 August 2009 draft, at http://www.sas.ubc.ca). The second will see UBC aim to be an “agent of change in the community,” where it works closely with and learns from other communities to model best practices. One example, among many, is to “work with key suppliers to build lifecycle-based sustainability targets and tracking mechanisms into all major contracts” (18 August 2009 draft, at http://www.sas.ubc.ca).

Alone, such changes cannot end the crisis of consumption. Both Szmant and Hatton emphasize this point. Yet, as the examples in The Shadows of Consumption repeatedly show, such changes can mitigate some of the environmental consequences, especially when, as Hatton correctly stresses, one of the primary goals is to reduce total consumption, and not just decrease the harm per unit of output. Hatton is right: reducing consumption and getting to global sustainability will certainly take much bolder steps than just transforming a university here and there; but, at least it is a place to start acting collectively for us academic folk who are most comfortable sitting alone at a desk, pondering.

About the Author

Peter Dauvergne is Professor of Political Science, Canada Research Chair in Global Environmental Politics, and Director of the Liu Institute at the University of British Columbia. He has also served as Associate Dean in the Faculty of Arts (2006-08) and Senior Advisor to the President (2008-09). In addition, he is the founding and past editor (2001-2008) of the journal Global Environmental Politics. His research focuses on the politics of global environmental change, including current projects on sustainable consumption and corporate social responsibility. The Shadows of Consumption won the Society of Human Ecology’s 2009 Gerald L. Young Award for the best book authored in 2008 in the field.