



COMMENTARY

Prices and quantities: Unsustainable consumption and the global economy[☆]

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Abstract

The ecological unsustainability of current consumption patterns is now well documented. One aspect of this problem which has not been sufficiently addressed is the growth of “excess consumption” driven by falling goods prices. The index of department store prices have fallen substantially since the early 1990s, in large part because global capital mobility and excess global labor supply has allowed firms to depress wages and avoid paying environmental costs. Consumers have responded by purchasing increasing numbers of these artificially cheap goods. The example of apparel is discussed in some detail, and data from other goods categories are presented. These trends suggest that achieving sustainable consumption in the US is not only a technical issue but will also involve fundamental changes in the global political economy to eliminate the artificially low prices of imported goods.

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1. Introduction: the problem of unsustainable consumption

The ecological unsustainability of current consumption patterns is now well documented (Vitousek et al., 1986, 1997; Meadows et al., 1992; Worldwide Fund for Nature, 1999; Wilson, 2002). According to

ecological footprint analysis, the world passed the point of sustainability in 1978 (Wackernagel et al., 2002). Direct measures of the state of global planetary resources, such as the comprehensive ecosystem assessment done by WRI, the World Bank, the UNDP and the UNEP find that ecosystems are in decline virtually everywhere (World Resources Institute et al., 2000). Even economists, a group that has traditionally been dismissive of scientific assessments of declining natural capital, have begun to recognize that the current scale of consumption is not sustainable. A joint project by Stanford ecologists and some of the world’s most distinguished economists

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reported, in a recent paper, that the answer to the question “Are we consuming too much?” might well be yes (Arrow et al., 2004).

Much of the literature on sustainable consumption has focused on technological solutions. Currently popular approaches include notions such as eco-efficiency, Factor 10, the Natural Step, the hydrogen economy and bio-mimicry (McDonough and Braungart, 2002; Beynus, 2002; Rifkin, 2002; Hawken et al., 1999). Some of the appeal of technological approaches is that they represent the economist’s “free lunch.” Advocates of technological solutions argue that more intelligent design and technological innovation can dramatically reduce, or even stop the depletion of ecological resources, as well as eliminate toxic chemicals and ecosystem disruption. The popularity of technological solutions is also attributable to the fact that they are apolitical, and do not challenge macrostructures of production and consumption. In particular, they fail to address increases in the scale of production and consumption, sometimes even arguing that such increases are not unsustainable, if enough natural-capital-saving technical change occurs.

By contrast, I argue that a *purely* technological approach will fail, because the incentives to increase the scale of consumption are too powerful. The experience of the last few decades is that with many consumer goods and practices, and especially the crucial case of fossil-fuel consumption, increases in scale have outpaced technological improvements. The example of vehicles is well known. The effect of cleaner cars has been outweighed by the acquisition of more vehicles, more miles driven per vehicle, and larger vehicles. Similarly, improvements in residential energy technologies have been counter-balanced by larger homes and more energy-using appliances, so that US residential energy use has not declined, despite substantial improvements in efficiency. Indeed, total residential energy use continues to increase (United States Office of Energy Efficiency and Renewable Energy, available at <http://www.intensityindicators.pnl.gov/residential.html>). These examples suggest that technological change is a necessary, but not sufficient condition for achieving sustainability. Indeed, the paradox of the current moment is strik-

ing—never before have the technological means for achieving sustainability been more promising, yet actual rates of ecological degradation are at record levels.

A central cause of that degradation is the growth of US private consumption. As is widely recognized, US private consumption currently entails a globally disproportionate use of resources, as measured by ecological footprint, measures of material weight, and numerous other indices and estimates (Wackernagel, 1999; Wernick, 1997). The 1990s and early 2000s have been a period of rapid consumption growth for the average household, as consumption outpaced income growth, and savings rates declined (Schor, 1998). Between 1993 and 2004, real personal consumption expenditures per capita rose from \$19,593 to \$25,973 (2000 dollars), or 33% (CEA, 2005: 247, Table B-31).

In addition, as is now well documented, the growth in average consumption conceals growing disparities across the distribution, as inequality of income and wealth increased over this period (Wolff, 2000). The top income quintile engaged in a round of what I have elsewhere termed “competitive consumption,” or what Robert Frank has called “luxury fever” (Schor, 1998; Frank, 1999). It seems likely that the shift to more unequal distributions of income and wealth has had its own environmental impact, in addition to the impact of rising income. Salient consumption practices with significant environmental impact have included upscaling to more luxurious versions of products, increasing product size, especially for vehicles and housing, acquisition of new products, and acquisition of multiple versions of items consumers already owned (televisions, automobiles, computers, apparel, etc.).

Indeed, this recent round of consumption has been particularly significant in its environmental impact. The shift to larger size vehicles, homes, refrigerators, televisions, and other goods has increased materials and energy use. The prevalence of multiple appliances is also materials and energy intensive. Examples include cooling appliances (refrigerators and freezers), computers, televisions, and cellular telephones. Environmentally important products that are present in a growing number of households for the first time include jacuzzis, snowblowers, and

large lawnmowers. The increasing globalization of the world economy has also facilitated the consumption of virgin and exotic resources on a broader scale than previously. Examples include travel to remote areas, the trade in exotic pets, and the use of rare, tropical hardwoods. (On exoticism in upscale consumer practices, see Holt, 1998).

One aspect of recent consumer history that has not been sufficiently addressed is the growth of what I term “excess consumption.” This refers to additional consumption that is triggered by declines in the prices of goods and commodities caused by the particular organization of the global political economy. Broadly, I intend the term excess consumption to refer to the fact that the structure of global power, and in particular the dominant role of the United States, has artificially reduced prices for consumers in the industrialized countries, and this in turn increases consumption demand both through substitution effects and because real purchasing power is greater. (It should be noted that the latter effect is not necessarily a neo-classical one, but can rely on an alternative consumption function, in which consumption is a constant fraction of real income. For an extensive discussion, and empirical testing of such models, see Marglin, 1984.) The concept of excess consumption includes the idea that cheap prices have contributed to a more rapid cycle of acquisition and discard in a number of consumer categories. Economists typically ignore such trends, assuming that they do not require special welfare analysis. (The reasoning is that if consumers are participating in a speeded-up cycle of acquisition and discard, it must be because holding onto goods longer yields less utility.) However, if the unrealistic and largely indefensible assumption of no interdependent consumer preferences is dropped, the acceleration of the acquisition and discard cycle may be associated with minimal welfare gains, but significant environmental impact. In such a case, the term excess consumption refers to the fact that a market intervention that reduces the quantity of units consumed will either maintain or raise welfare. Measurement of the amount of excess consumption, and its precise environmental impact is beyond the scope of this paper, and in any case would be a hypothetical exercise relying on speculative counter-factuals. My purpose here is more modest: to begin a con-

versation about a neglected aspect of the literature on sustainable consumption.¹

The discussion below treats manufactured goods and primary commodities separately. I term these two cases the “global sweatshop” and the “cheap banana.” The former refers to the fact that wages in foreign manufacturing are kept artificially low, and environmental effects remain externalized as the US extends its domination of global markets and economies. One piece of data indicative of this shift to low cost off-shore production in manufactured goods is the index of department store prices. Department stores are a key retail outlet for imported manufactured goods, and as such, their prices provide a broad measure of the costs of these goods to the American consumer. The department store price index compiled by the US Department of Labor indicates that in all categories—soft goods, durable goods, and miscellaneous—prices have declined. Overall, the total store price index declined from 542.9 in February 1993 to 494.3 in February 2005 (see Table 1). Durable goods prices declined most, from 457.6 to 381.0 over the same period. Wal-Mart, which now holds a commanding position in the department store sector, has been important in reducing prices by squeezing suppliers and keeping domestic wages low.

The second effect (the “cheap banana”) refers to a somewhat different process, operating in the markets for primary commodities. An exemplary historical case is the US intervention to overthrow the popularly elected government of Jacobo Arbenz in Guatemala in 1954, and the resulting availability of cheap and plentiful bananas in US supermarkets. Over time, the once luxurious tropical fruit became a lunchbox staple not only for affluent consumers but also for many of modest means as well. Intriguingly, in the late 1990s bananas again became the target of political maneuvering by the United States, as United Fruit, the company most centrally involved in the 1954 coup, convinced the Clinton Administration to file a claim at

¹ It should be noted that the term “excess consumption” is not a normative one, and does not suggest that all consumers, especially low-income consumers, consume “too much.” It is an analytic term, and refers to consumption in the aggregate. There are important, analogous arguments about the sub-optimality of the existing distribution of income that hold that the ratio of consumption expenditures of high to low income consumers is too large.

Table 1
Trends in selected consumer goods prices 1993–2005

Year	Department store inventories ^a		Apparel ^b	Toys ^b	Personal computers and peripheral equipment ^b	Televisions ^b	Footwear ^b	New vehicles ^b	All durable goods ^b
	Store total	Durable goods							
(Feb) 1993	542.9	457.6	134.0	122.4	N/A	N/A	126.0	131.1	119.8
1994	545.8	463.1	133.2	122.9	N/A	N/A	126.6	135.7	123.1
1995	545.8	465.1	131.9	122.9	N/A	N/A	125.4	139.9	127.4
1996	548.3	467.3	132.2	125.3	N/A	65.7	126.5	142.8	129.1
1997	554.2	470.0	133.0	126.7	100.0	62.8	127.3	144.6	129.5
1998	552.3	462.4	133.0	122.6	91.3	60.0	127.9	143.6	127.9
1999	540.7	455.6	130.8	115.9	59.7	56.4	126.4	143.0	126.2
2000	537.7	444.9	130.4	107.1	45.1	51.9	123.9	142.2	125.1
2001	532.4	433.1	129.6	101.2	33.9	47.0	124.5	142.5	125.7
2002	516.6	415.5	124.7	98.9	23.8	42.0	121.3	140.4	122.5
2003	502.3	402.9	121.8	88.3	19.1	36.9	121.6	138.4	119.4
2004	491.9	388.6	120.0	85.6	16.0	31.4	118.8	137.5	115.0
(Feb) 2005	494.3	381.0	120.0	79.6	13.5	27.8	123.0	139.0	115.8

Sources: Consumer Price Indices, U.S. Department of Labor, Bureau of Labor Statistics, available at <http://www.data.bls.gov>.

^a Department Store Inventory Price Index.

^b Consumer Price Index- All Urban Consumers, U.S. City Average.

the WTO against European preferences for small Caribbean banana farmers. The case brought the two sides to the brink of a trade war.

On the face of it, the examples of the global sweatshop and the cheap banana appear rather far afield. And of course, the global political economy is not what it was in 1954. The growing power of the Bretton Woods and other international institutions, the intensification of economic competition among nations, and other developments have added layers of complexity. However, for our purposes there are some key features of the post-WWII global political economy which have endured, and which tie together the imperialist interventions of the early decades and contemporary developments. That is, both the global sweatshop and the cheap banana rely on the projection of American power—economic, political and military—to reproduce a world of artificially cheap resources and commodities. These artificially low prices and wages undermine fundamental principles of sustainability, and are the basis of the idea of excess consumption. If the market operated as a textbook case, with small firms in competitive markets, no state, and no threat of military power to protect firms' interests, both wages and prices would be higher, and consumption would be lower.

The proliferation of cheap resources and commodities also suggests a political point. Those who are committed to reconstructing the global ecology must

become active critics of the operation of the global economy and the current rise of US imperial ambitions and the projection of US military power. This involves making alliances with the global justice movement and a resurgent global peace effort. For unless those movements become more powerful, the positive progress available from the technological side will be swamped by ongoing pressures for excess consumption of both resources and manufactured goods.

2. The global sweatshop—the case of apparel

Among the trends which have made possible the substantial rise in US consumption has been the growth of low-wage, foreign production in a variety of product categories—apparel, footwear, toys, computers, software, tourist hotels, cars, consumer electronics. These and many other commodities are artificially cheap because the rules and workings of the global economy have depressed the price and power of labor, often female, around the world.

Consider the case of apparel. Apparel is priced far too low to reflect its true economic and ecological costs. It is now possible to buy clothing, long a high-priced and valuable commodity, by the pound, for prices comparable to cheap agricultural products such as rice and beans. This is a historically unprece-

dented situation, perhaps best illustrated by the fact that apparel has historically been so valuable that used clothing has routinely served as an alternative local currency (Lemire, *in press*).

A key element of low apparel prices is the shift to offshore production (see, for example, Rosen, 2002; Ross, 1997, 2004; Klein, 2000; NLC, 1998, 2001 on labor conditions and apparel policy). This shift has taken place over a long period, but in recent years, the fraction of apparel that is imported has grown dramatically. By 2002, in all but three apparel categories (men's suits, dresses, and women's swimwear), imports accounted for more than 80% of domestic consumption, and in 10 of the 16 remaining categories, the share of imports exceeded 90% (U.S. Census Bureau, *Current Industrial Reports*, 2003, Apparel, Table 5).

The conditions of female labor in offshore garment production have been subject to widespread publicity, and have been condemned as highly exploitative. What has been less noticed, however, is the impact of the Asian financial crisis of the late 1990s on wages, and the subsequent dynamics of apparel importation and consumption. The crisis itself was the product of a series of neo-liberal reforms imposed by the US Treasury, through the International Monetary Fund, which led to a number of Asian economies collapsing under the weight of excessive privatization and de-control of capital. (For an insider's view, see Stiglitz, 2002.) Income and wages throughout the region plummeted in the years immediately succeeding the crisis. In Indonesia, which had been industrializing rapidly, average GDP per person, measured in Purchasing Power Parities, declined from \$3971 in 1995, before the crisis, to \$2830 in 2001, 6 years later, a decline of 29%. In Malaysia, per capita GDP fell from \$9572 to \$7910, or 17%. In Thailand, the decline was from \$7742 to \$6230, or 19.5% (1995 figures from Human Development Report 1998; 2001 figures from World Bank, 2000). The financial crisis interacted with ongoing structural features in the market for apparel workers to push wages to very low levels in countries such as Indonesia and Thailand. Notably, wages in Malaysia remained higher, most likely due to its imposition of capital controls, and because it was less affected by the crisis.

The financial collapse also exerted downward pressure on wages beyond those countries that were

directly affected, and wages have remained extremely low despite the growth in apparel production and hence labor demand throughout the region. In Bangladesh, which by the end of 2001 had become the fourth largest apparel exporting country to the US, wages are as low as 7 to 8 cents/h for some tasks, with a high of only about 17–18 cents/h (National Labor Committee, 2001). Chinese wages are somewhat higher, but still very low. Wal-Mart, which controls 15% of the US market and is the world's largest clothing retailer, pays workers in Chinese factories as little as 13 cents/h, with the norm below 25 cents. High-priced designers also exploit cheap labor-rates for Ralph Lauren and Ellen Tracy are 14 to 20 cents, Liz Claiborne 28 cents (National Labor Committee, 1998). The crisis also had financial effects, reducing the price of Asian countries' currencies, thereby making their imports even cheaper to US consumers. Downward pressure on apparel prices has also been a result of the growth of imports from China. The end of quotas under the Multi-Fibre Agreement in January 2005 is expected to lead to a dramatic increase in Chinese imports and is likely to further depress prices.

In the United States, apparel prices began falling after 1998, and have continued to fall since then (see Table 1). The CPI index of apparel prices for urban consumers has fallen from 134.0 in 1993 to 120.0 in 2005. Fashionable, brand-new clothing can be had at record low prices; there are cases of individual garments being sold on markdown at 99 cents in regular retail establishments. As one might expect from the decline of prices, data from the Census Bureau on the quantity of units (or individual pieces of apparel) imported indicate a sharp increase in recent years. In 1996, the United States imported 7.38 billion units; in 2002, imports totaled 13.51 billion units, a rise of 83%. The 2002 import level translates to approximately 48.3 new pieces of imported apparel purchased per year, per person (author's estimates from data of U.S. Census Bureau, *Current Industrial Reports*, 1997, 2003, Apparel, Table 5).

Low apparel prices have contributed to what we might term "excessive accumulation" of garments by American consumers, and a move toward "disposable apparel." Excessive accumulation is characterized by high rates of discard, low rates of utilization of existing inventories of garments, rapid fashion cycles, and

a failure to wear garments through their useful life cycles. Excessive accumulation is an ongoing trend, but has been exacerbated by rapid economic growth in the 1990s and the continuing decline of apparel prices.

Another vantage point from which to consider excessive apparel consumption is the secondary market for used apparel (see Schor, 2002). Interviews with employees of Goodwill and others in the industry revealed that the market for used clothing collapsed in the late 1990s, not long after the Asian financial crisis. Renee Weippert, Director of Retail Services at Goodwill International, estimated that prices in the salvage market dropped to 2–3 cents/lb by late 1999, subsequently recovering to the 7–8 cent range (interview with author). Two developments appear to have been at work. First, the booming US economy throughout the 1990s yielded a sharp increase in rates of discard throughout the decade. Donations to Goodwill increased by an estimated 10% or more each year (interview with author). Second, the demand for used clothing fell, both domestically and abroad. In the US, the decline in new apparel prices led to a shift out of the used segment of the market, which depressed used clothing prices. At the same time, purchasing power in Asian markets fell as wages plummeted, eliminating a key market for used American clothing. (For an in-depth look at the overseas market for used clothing, see Hansen, 2000.) Unpublished analyses by Kristen Heim and myself find that imports of new apparel, by volume, are a significant predictor of the export of used clothing from the US to the rest of the world.

The apparel case also illustrates the important role of US imperial power. Although in apparel, factories are not typically directly owned by US multinationals, in many cases their market and political power yields effective control over the supplying companies. Furthermore, US military and political power is key to the survival of governments in exporting countries that repress unions and worker protests and back up the power of factory owners. In some cases, for example Bangladesh, factories are owned by members of the military and the government, who wield considerable power to repress workers. This larger political environment, and its role in reproducing the exploitation of labor has been detailed extensively (Chomsky, 1999, 2003; Klein, 2000; Wallach, 2004).

3. Falling prices and rising quantities—other manufactured goods

Apparel may be an extreme case. But the dynamics of low cost production, falling import prices, rising expenditures and rising quantities appear to describe markets for a variety of other products as well. I have been able to locate data on units consumed for only some products, and usually only from 1996–1997 to 2001–2002. Unless otherwise noted, estimates of quantities are my calculations from data provided in the Census Department's Current Industrial Reports. Consumer price are from the US Department of Labor's Consumer Price Index for Urban Consumers. Consumer expenditures are from the US Department of Labor's Survey of Consumer Expenditures (both are accessible from bls.gov). Price indices for a number of commodities are shown in Table 1.

Consider toys, most of which are now made in China. In 2001, US expenditures on toys totaled \$29.4 billion a year. Eighty percent of that total was imported, and 71% came from China (National Labor Committee, 2002). The average production wage in Chinese toy factories is 14–19 cents/h, and the wage range is from 7 to 33 cents. Extremely long hours (13–19/day) and 7-day workweeks are the norm (National Labor Committee, 2002). Toy prices have fallen dramatically. The CPI for toys went from 122.4 in 1993 to 126.7 in 1997, and subsequently fell to 79.6 in 2005. The total volume of toy units consumed in 2001 was 3.6 billion. Assuming that all toys are consumed by children ages 0–12, that translates to 69 new toys a year for each child. (This is a conservative estimate, because although some toys are consumed by adults, children aged 10–12 now consume very few toys. Indeed, the toy industry has lowered its upper age threshold to 10.) (Author's estimate from National Labor Committee, 2002).²

The collapse of computer prices, and high acquisition rates for computing machines is another well-known example. A CPI category for personal com-

² Referees have asked about the nature of toys, and their environmental impact. This category does not include video games, which account for the bulk of toy revenue. The vast majority of toys currently produced are made of plastic. The 69 units per year figure includes both toys sold directly, and the large number which are given with fast food meals.

puters and peripheral equipment is available from 1997. By 2005, the index had fallen to 13.5, from a base of 100 in December 1997. In 2001, 22.76 million computers were consumed domestically, most of them imported. (Domestic consumption is calculated as manufacturers' shipments plus imports for consumption minus exports of domestic merchandise, which is typically contained in Table 3 of the Census report.) Here too disposability has become the norm. It is estimated that in 1998, 20 million computers became obsolete and were taken out of service, and that in 2005, 63 million personal computers will be retired. (Computer retirements from <http://www.backthruthefuture.com/computerrecycling.htm>.) Similarly, television prices have collapsed, from 65.7 to 27.8 in 2005. The number of televisions purchased by American consumers rose from 33.9 million in 1997 to 38.3 million in 2002, an increase of roughly 13%.

There is also data available on a number of other products. The Current Industrial Reports series provides data on bed and bath furnishings, i.e., sheets and pillowcases, and towels. Between 1996 and 2002, the number of purchased sheets and pillowcases rose 29%, and towels increased 22%. Or consider footwear, a product that is similar to apparel in terms of exploitative wages and working conditions. The footwear index declined from 126.0 in February 1993 to 123.0 in February 2005. Census data on shoe imports reveal a continuing increase, which in 2003 comprised 98.9% of domestic consumption. In that year, 1.2 billion pairs of shoes were imported, or just over four new pairs per person per year. In contrast to other product categories, however, the Census estimates reveal a decrease in apparent domestic consumption between 1993 and 2003. Given that annual consumer expenditures on foot wear rose over this period, consumers must be upscaling to more expensive shoes and boots.

Prices have fallen in a variety of other product categories as well, however, I have not found quantity data for these products. Appliance prices have declined, from 100 in 1997 to 86.6 in February 2005. Between 1993 and 2003, consumer expenditures on appliances rose. (Major appliance purchases rose while expenditures on small appliances remained constant.) New vehicle prices rose from 131.0 in February 1993 to 144.6 in 1997, but fell

to 139.0 by February 2005. The number of vehicles purchased increased, as dollar expenditures on new vehicles increased considerably, from \$1216/year in 1993 to \$2052 in 2003. The price index for sporting goods has fallen from 119.7 in February 1993 to 114.37 in February 2005. Jewelry and watches have declined from 146.2 in February 1993 to 127.1 in February 2005. Overall, the CPI index of durables has fallen from 119.8 (February 1993) to 115.8 (February 2005).

4. Environmental impacts of rising consumption

The foregoing discussion has provided some data on the trend of rising consumption of manufactured goods by units consumed, rather than the more common metric of dollar values. I have chosen to focus on units because they are a more environmentally relevant measure. Of course units consumed is not an ideal measure. The optimal measure would be a product-specific environmental impact per unit or dollar. But such a measure does not exist. Furthermore, there are no well-elaborated models of the global economy that allow us to readily assess the impact of material consumption flows at the level which is relevant for this analysis. Such a model would require both data on environmental impacts at the site of production, transport impacts, and consumption externalities at the point of consumption. Given the paucity of relevant data, what, if anything, can we say about the environmental impact of the rise in manufactured goods consumption?

First, it is important to remember that all manufactured goods have environmental effects associated with their production and in some cases, consumption. In many cases, these effects are substantial. Cotton production is pesticide intensive and depletes soil at a rapid rate. US-bound textiles use carcinogenic azo-dyes (they have been banned in Europe) (Robins and Humphrey, 2000; Schor, 2002). Textile and computer chip production are extremely water intensive. Leather tanning for shoes, handbags, clothing and other goods uses highly toxic substances and is contributing to significant water pollution in regions with tanning industries, such as South Asia. Computer production involves the intensive use of toxic metals, many of which are currently

entering the waste stream (see [Durning and Ryan, 1997](#)). Mining for the precious metals that are used in jewelry and watches is extremely destructive to ecosystems. In addition, mining activities employ highly toxic chemicals. The ecological effects of automobile production and use have been widely documented. Toys, perhaps the least ecologically significant of the commodities discussed above, are nearly all plastic, and produced with toxic chemicals and with oil-intensive processes. *Ceteris paribus*, increases in the consumption of all these products result in higher levels of toxic output, materials use, ecosystem degradation, and other negative environmental impacts, than is the case when lower quantities are consumed.

However, one might well ask, is *ceteris paribus* in this case? Ideally, we would want to consider these trends within a general equilibrium context. Doing so requires answers to questions such as whether the growth in durables consumption is at the expense of saving and investment, government expenditure, or the consumption of services, and what the environmental impact of those activities is. Furthermore, we need to know whether the macroeconomy follows a neoclassical, Keynesian or Marxian process. (In the neoclassical world, higher consumption crowds out investment or government spending, in the Keynesian model it yields higher total output.) In this case, there are also global general equilibrium effects. To be more precise, has the rise in U.S. consumption of manufactured goods been accompanied by declines in the consumption of more damaging products?

Perhaps, but it seems unlikely because manufactured goods have generally been understood as more ecologically damaging than services. Of course, services are an extremely diverse category, which include both highly damaging activities (tourism with air travel) and relatively low impact activities (education, human services, health care). Furthermore, the shift to offshore low wage production has been linked to lower enforcement of environmental regulations and a process of deliberate relocation of production to avoid paying environmental costs (e.g., tanning, disposal of electronic waste). Both these arguments suggest that the net impact of the trends discussed above result in higher environmental impact. So too does an analysis in which

the increased consumption of materials-intensive manufactures has few general equilibrium impacts, and can be mainly analyzed as an expenditure neutral increase in units consumed and therefore in throughput in the manufactured goods sectors, plus the added transport costs. More generally, to the extent that the trends I am describing represent an increase in total consumption, there is an intensified environmental impact.

5. The cheap banana—the collapse of primary commodities prices

So far I have discussed the growth of consumption in manufactured goods. There is an analogous development occurring with primary commodities. Cheap and falling prices made possible by the projection of US power abroad are resulting in increased consumption of imported commodities. The canonical case is perhaps the banana.

The political economy of banana production is relatively well known, however it may be worth reviewing it briefly. Early in the century, American companies opened operations in the banana producing regions of Central America and established plantation agriculture, relying on exploited labor and eventually chemical agriculture. In Guatemala, United Fruit became the country's largest employer and also held monopolies in other areas of the economy (railroads, port, electric company). In 1954, the country's first democratically elected government, led by President Jacobo Arbenz, proposed minimum wage laws, legalization of unions, and a populist land reform. In response, United Fruit convinced the US government to carry out a coup against Arbenz, which they did through a CIA-organized invasion and aerial bombardment. Interestingly, the Justice Department officially rationalized its prosecution of the coup on the grounds that Arbenz was illegally cheating the American public out of the right to buy competitively priced (that is, cheap), bananas.³ (On this history,

³ United Fruit was able to arrange the coup partly by virtue of its close ties with the US government, which included business ties with CIA director, Allan Dulles, his brother, former Secretary of State John Foster Dulles, and a variety of other military and political officials.

see Kwitny, 1984, Justice Department on competitively priced bananas is pp. 227–228). One longstanding result of the US interventions has been the transformation of a once scarce and exotic tropical fruit into an everyday basic of the American diet. In 2002, the average American ate 26.8 lb of bananas a year, far more than any other fruit, including all domestically grown fruits (*Statistical Abstract, 2004–2005*, Table 200, p. 132).

This story also has a recent chapter. In the late 1990s, United Fruit brought the US and Europe to the brink of trade war when CEO Carl Lindner, a major Clinton Administration campaign contributor, convinced the US to mount a WTO challenge against a European development program for small impoverished banana growers in tiny islands like St. Lucia and Grenada. United Fruit was at that time trying to make inroads into the European banana market, and resented the quotas European countries had put in place to help struggling farmers. Despite the lack of American jobs involved, the US pressed the case, and won. The Europeans put up a strong fight, and in the process threatened sanctions on US goods. The rhetoric heated up and trade war seemed about to ensue. In the end, the demands of United Fruit were met, and socially and ecologically stable banana production was undermined.

Cheap bananas have been followed by other cheap commodities—as the structure of international markets keeps prices down for the agro-conglomerates who are the major international buyers. Primary commodities, excluding energy products, have been subject to declining prices for more than 20 years, a period coinciding roughly with the shift to neo-liberal policies and a globalizing world economy. In the 1980s, the UN index of non-fuel commodity prices declined 45% (Maizels, 1992). In the first half of the 1990s, prices were roughly stable, but since 1995, they have declined sharply. The IMF index for non-fuel commodities, set at 100 in 1995, stood at 79.1 in April 2003 (IMF non-fuel primary commodities database). Some commodities have experienced especially extreme cases of price decline, with ensuing public attention. For example, coffee prices fell by more than 80% in the late 1990s and early 2000 and 2001, and thousands of coffee farmers were wiped

out. The collapse of cocoa prices in the late 1990s rendered them too low to support adult farmers and their families, and growers turned to what has now become a substantial level of trafficking in child slaves.

These declining prices have been followed by rising consumption for some primary commodities, although price elasticities of demand for food are lower than for manufactured goods, and far less of the price decline has been passed on to consumers. Consumption of most imported fruits, such as bananas, pineapples, cantaloupes, mangoes, kiwifruit, papayas, and other varieties have risen in the last decade. Between 1990 and 2002, per capita consumption of bananas went from 24.3 to 26.8 lb/year, in contrast to declining consumption for apples, peaches and nectarines, and plums and prunes, which are domestically grown. “Other” fruits (which are mainly imported) rose from 5.2 to 8.6 lb/year (fruit consumption from *Statistical Abstract, 2004–2005*, Table 200, p. 132). Per capita consumption of cocoa rose in the second half of the 1990s, but has subsequently declined (*Statistical Abstract, 2004–2005*, Table 199, p. 131). Coffee consumption has not increased, most likely because of the rise in consumption of carbonated soft drinks, which in turn have been driven by the low price of high fructose corn syrup. (Per capita consumption of corn syrup has risen from 49.6 lb in 1990 to 62.8 in 2002. *Statistical Abstract, 2004–2005*, Table 199, p. 131).

6. Sustainability politics and the global economy

The foregoing analysis suggests that environmentalists need to consider the obstacles to sustainable consumption created by corporations’ quest for cheap labor and resources. I have argued that falling prices for imported goods have been accompanied by increases in the quantity of units consumed and that this is an important effect of the global economy and the projection of US power abroad. These developments have been insufficiently recognized in the discourse on sustainable consumption.

My perspective suggests the need to re-structure the rules of the global economy to prevent exploitation of labor and resources, which should have the effect of raising the prices of imports both

relative to other goods, and also in real terms.⁴ Higher prices should reduce demand for imports. A shift to higher foreign wages and more internalization of ecological costs will help satisfy elementary criteria of justice, such as the right of foreign laborers to a decent livelihood (a human rights principle) and the right of all people to share in the bounty of the earth (an ecological global equity principle). While some have argued that increases in purchasing power in developing countries have a detrimental ecological impact, higher production wages will raise the consumption of the poor, rather than the middle classes. This should be positive from an environmental point of view. In any case, because the average footprint of US consumers is above that of almost all other consumers, any shift of purchasing power away from US consumers to other countries should on balance be environmentally beneficial. (On consumption and environment in the South, see Myers and Kent, 2004).

In addition to the argument that imperial power is artificially depressing prices and raising consumption,

⁴ One dimension of the problem that I have not addressed is the way in which cheap prices have become increasingly essential for the daily reproduction of low-wage workers and the poor. The long-term decline of the real minimum wage, the erosion of market power and protections for workers, and the growing supply of so-called low-skilled labor has led to a persistent decline in real wages for the lower tier of the labor market. Coupled with the elimination of the safety net, low income people have come to rely on low-price outlets such as Wal-Mart. There is a vicious circle in which the availability of cheap goods makes possible the payment of low wages, and the payment of low wages necessitates the availability of cheap goods. Significantly, a single entity such as Wal-Mart and similar stores has a significant effect on both consumer prices and domestic wage setting. In the short run, this dilemma suggests that the interests of the poor and those of sustainability are at odds. However, this is a short-sighted perspective. In the long run, US global policies create and perpetuate poverty abroad, which is increasingly tied to domestic poverty. This occurs by creating desperate immigrants who have no choice but to work for sub-standard wages, making possible the foreign sweatshops which put domestic enterprises out of business, and facilitating capital mobility which undermines the bargaining power of domestic labor. Furthermore, maintaining a regime of ecologically, unsustainable, but low prices in order to sustain purchasing power for the poor solves a problem for a subset of the population, but reproduces another one for the entire planet. Almost any approach that boosts the purchasing power of the poor would be preferable.

there are other reasons to believe that US consumption is too high, both relative to the provision of leisure, as well as inter-temporal allocation (see Arrow et al., 2004 on inter-temporal allocation; Schor, 2005 on the production–leisure tradeoff). One argument along these lines, which I have made elsewhere, is that global sustainability can and should be achieved partly by wealthy countries taking productivity growth in the form of more leisure, rather than more consumption. This will free up scarce ecological resources for developing countries (Schor, 1991, 2001, 2005).

Regrettably, the current rules and structure of the global economy are moving the world in an opposite direction. Neo-liberal policies continue to undermine the bargaining power of labor. The elimination of regulations governing capital flight have led, not only to catastrophes like the Asian financial crisis, but also to more leverage for capital, which uses its mobility to repress wages. This capital flight, both actual and threatened, has been an important component of the ongoing regime of low and even falling wages in developing countries. The Bretton Woods institutions have to date served the interests of multinational capital, at the expense of workers and in many cases, domestic capital. My larger point, which is well documented in the political economy literature, is that the neo-liberal policies, existing global economic institutions and structures, and the exercise of its considerable power by the US government reproduce the global regime of cheap and disorganized labor.

The preferable path would be to institute structural changes in the operation of the global economy. These include strong labor and environmental standards that will end sweatshop conditions and environmental hazards. A just and ecologically healthy global economy will have to be rooted in a structure of wages in currently poor countries that can support strong domestic demand, as well as a closer balance of power between capital and labor, more equal distributions of income and wealth, and re-regulation of some financial markets. As environmentalists have long recognized, sustainability will also require more sophisticated property relations than the current private property model allows (see Ostrom, 1990; Parthasarathi, 2002). In light of these objectives, the need for ecologists to

make common cause with others concerned about global justice and peace has become a most urgent task.

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