

## **PART THREE: ETHICS AND ECONOMICS**

### **CHAPTER 13**

#### **DESIRE FOR WEALTH IN FREE-MARKET ECONOMIES**

##### **13.1 Return to the basic problem**

Recapitulated as simply as possible, our environmental crisis boils down to the fact that the biosphere is struggling under the impact of far more entropy than it can get rid of. One pervasive form of entropy is low-grade heat, which when trapped in the atmosphere leads to problems of global warming (sections 5.3, 5.4). Another is the decimated layer of ozone in the stratosphere, allowing the entry of ultraviolet radiation in amounts causing increasingly severe damage to the earth's essential food-chains (section 5.6). Other damaging forms of entropy discussed in previous chapters include the accumulation of nonbiodegradable wastes, progressive desertification of once-fertile crop lands, and a loss of species diversity necessary for a healthy biosphere.

As already observed, a lion's share of this excessive entropy is due to human industry, contributed in amounts that have been steadily increasing since the beginning of the Industrial Revolution (Chapter 6). Viewed in a positive light, the time since then has been a period of economic growth, resulting in steadily increasing amounts of consumer goods and services. The downside of this rising tide of affluence is that it has been generated by profligate consumption of fossil fuel. This extravagant consumption is a major cause of the entropy overload now afflicting the biosphere.

Economic growth is brought about by the expenditure of negentropy (energy and raw materials) taken from the biosphere. When this negentropy is expended, an equivalent amount of entropy is returned to the biosphere in such forms as waste material and low-grade heat. It was shown in Chapter 7 that for every increase in GNP there is a corresponding amount of additional entropy for the biosphere to deal with. In a

biosphere already overloaded with entropy, every significant increase in GNP results in further deterioration in the ecological structures supporting human society.

The cumulative upshot is that the biosphere is becoming increasingly incapable of supporting human society at its current level of economic activity. Although no one knows exactly how society will be affected when its ecological support systems reach the point of collapse, it almost certainly will encounter increasingly widespread famine, spreading social conflict, and extensive failures of material infrastructure (e.g., loss of coastal cities).

Details aside, this is the nature of our environmental crisis. Nation by nation, and sector by sector, the world economy is running out of control, producing increasingly more entropy than the biosphere is able to discharge back into space. A question of utmost urgency at this point is how economic activity worldwide can be scaled back to a level the biosphere can support.

A necessary first step toward answering this question is to isolate the factors that drive economic growth and to gain an understanding of how they operate in a free-market context.<sup>1</sup> The next step is to look for ways this effect could be neutralized. Given the likelihood that several factors contribute to this effect, we should look for one that might conceivably be altered in ways that would bring excessive economic growth under control. This sets the task of the present chapter. Subsequent chapters will consider how needed alterations might be brought about.

### **13.2 Economic growth driven by desire for wealth**

To orient our search in the right direction, let us recall Adam Smith's metaphor of the Invisible Hand (section 10.3). As Smith himself put it, although an individual "intends only his own gain" and pursues only "his own interest," the resulting economic activity frequently promotes the interest of society at large. Subsequent commentators on

this passage have glossed “pursuing self-interest” as advancing one’s own good (Bishop Butler), as satisfying one’s private appetites (Bernard Mandeville), and as maximizing personal profit.<sup>2</sup> Although Smith may not have said so explicitly, the passage suggests that he viewed pursuit of self-interest as the driving factor behind economic activity generally.

It seems likely that Smith thought of the self-interest driving economic activity as covering personal benefits of various sorts he left unspecified. But the concept became more specific in the thought of his followers. In discussing the classical notion that economic phenomena follow logically from a few basic principles, Georgescu-Roegen identifies as two of those principles (1) that a greater good is preferred to a smaller, and (2) that everyone seeks the greatest quantity of wealth with the least labor and self-denial.<sup>3</sup> Behind this, G-R says, is the classical view that all economic phenomena are grounded in the desire for wealth. Slightly rephrased, this is the view that the desire for wealth is the driving force behind all economic activity.

This classical view that economic activity is driven by desire for wealth continues to apply in today’s economic climate. The point, of course, is not that people go shopping (a form of economic activity) with the intent of becoming wealthy. The point rather is that market activity generally (which makes things available to buy) is spurred by desire for wealth on the part of those situated to benefit.

Given our current economy’s emphasis on the “bottom line,” it seems adequately clear that people engage in economic activity for the wealth it provides. But economic activity in a general sense is not equivalent to economic growth. Let us sketch out a line of reasoning relating desire for wealth to the phenomenon of economic growth specifically.

The argument begins with the commonplace observation that economic activity is a major *source* of wealth. Given a broad enough conception of economic activity, it may

in fact be the only source.<sup>4</sup> This being so, the normal path to follow for someone desiring wealth is to engage in economic activity. Just as someone desiring knowledge will participate in educational activity, so someone desiring wealth will pursue activities by which wealth is acquired.

Once a person's economic activities begin to generate wealth, moreover, that person's desire for more wealth often remains unsatisfied. As thoughtful observers of this phenomenon have long realized,<sup>5</sup> desire for wealth is open-ended. Like desire for pleasure and desire for power, desire for wealth is not readily satiated. Once wealth has been accumulated in relatively small quantities, desire continues for yet further accumulations. By this dynamic, desire for wealth induces affected individuals into progressively higher levels of economic activity.

The next step in this line of reasoning is to observe that increased economic activity on the part of individuals who desire more wealth is tantamount to increased activity on the part of money-making organizations they participate in for that purpose. For example, individuals invest in corporations for additional income, enabling the corporations themselves to expand their business activity. Expanded activity on the part of particular business organizations, in turn, contributes to higher GNP on the part of the overall economy. In briefest summary, this is the manner in which desire for wealth on the individual level leads to growth on the level of the economy at large.

There undoubtedly are other forces propelling growth on the corporate level. One that might be suggested is a competitive market environment in which firms that fail to maintain a certain margin of profit soon go out of business. Keeping a business profitable requires investment, perhaps in more efficient technology, more productive capacity, or more extensive advertising. Rather than taking expenditures for such purposes out of previous profits (which typically go into salary increases and shareholder dividends instead), a firm may elect to fund them by loans at commercial rates of interest.

To pay back these loans without eroding future profits, however, the firm's gross income must continue to rise. And with growing incomes on the part of its constituent firms, the economy at large continues to grow. This indeed is one respect in which economic health depends upon continuing growth, in accord with the dictates of mainstream economics (section 10.6).

Yet while some such dynamic presumably operates in contemporary free-market economies, it does not constitute an exception to the general thesis that growth is driven by desire for wealth. We may grant that an economy's growth results from the need of its constituent firms to operate on a profitable basis. Nonetheless, this need is a consequence of arrangements by which executive salaries and investor dividends are siphoned off from corporate profits. Without desire for wealth on the part of its managers, there would be no incentive to keep a firm afloat in the first place. Here is yet another avenue through which economic growth is driven by desire for wealth on the part of individual people.

This line of reasoning does not exclude other factors behind economic growth that have nothing to do with desire for wealth.<sup>6</sup> All it purports to show is that desire for wealth is the central factor. Without desire for wealth operating behind the scenes, economic growth would slow down and soon grind to a halt.

### **13. 3 Wealth a by-product of consumer demand**

Wealth takes many forms in modern economies. Individual wealth could take the form of stocks and bonds, of real estate, or of money deposited in a bank. A corporation might be wealthy in the market value of its shares, in its capital assets, or its holdings in other companies. The wealth of a nation, in turn, is the total wealth produced in it, commonly measured as GDP (section 7.2) over a given accounting period.

Some forms of wealth can convert to others (e.g. cash and property), while others (e.g., GDP) cannot. What they have in common is that all trace back to the production of

goods and services. This is why GDP is an appropriate measure of national wealth. A nation's composite wealth boils down to the goods and services produced by its individual and corporate citizens.

We must take care to note, however, that wealth does not derive from production alone. Defined generally, an economic good is something that can be sold in the marketplace.<sup>7</sup> To build up an inventory of things that no one will buy does not amount to the production of wealth. The production of things contributes to wealth only when people are willing to buy them.

Wealth is created by producing goods that are ultimately purchased. This means that consumption is essential to the production of wealth. As far as economic growth is concerned, it means that growth entails increased production and increased consumption alike. To understand the dynamics of economic growth, we need to understand how production and consumption interact. The present section examines this interaction.

Goods and services flow to the consumer as a result of consumer demand. Needless to say, the goods that enter into that flow must be supplied by a producer. But the mere fact that goods have been produced does not set them in motion toward potential consumers. Without active consumer demand, goods would not leave the producer's warehouse. There is no way of *pushing* them into the consumer pipeline if no one is interested in exchanging money for them.<sup>8</sup>

In a manner of speaking, consumer demand sets up a "suction" that *pulls* goods through the pipeline. Think of a drinking straw as a simple analogy. By sucking on one end, a child creates a vacuum that is filled by soda pop entering the other end of the straw. Without suction, the liquid would stay in the glass. Similarly, in the case of the pipeline between producer and consumer, the flow of goods is set in motion by active consumer demand and not by a supply of goods sitting passively in the warehouse.

Given adequate availability of goods in the warehouse, moreover, the volume of

goods flowing through the pipeline is directly correlated with the size of consumer demand. The greater the demand, the more goods flow from producer to consumer. To the extent that the volume of goods flowing through the pipeline can be controlled, accordingly, a direct way of exercising control is by manipulating consumer demand. If some agent wants to increase economic activity in a given sector of the economy, one available means is to stimulate demand in that particular sector.

This is the *modus operandi* by which desire for wealth leads to economic growth. Wealth is a by-product of economic activity. Inasmuch as economic activity is keyed to consumer demand, managers desiring additional wealth will seek opportunities to stimulate additional demand. Driven by additional consumer demand, production of goods will increase as well. And increased production of consumer goods amounts to further growth of the economy in question. In brief, desire for wealth leads to economic growth by stimulating demand for relevant goods and services.

This emphasis on consumer demand as the key to economic growth follows the tradition of Adam Smith (section 10.3). In Smith's view, expansion of production (by division of labor, etc.) requires larger consumer markets to absorb the additional goods produced. A condition of this happening, he thinks, is that the class of consumers must be expanded to include ordinary workers, who must receive ample wages to buy more than bare necessities. Another condition is that capital (land, factory equipment) must be available to support higher levels of productivity. Once enabling conditions like these are in place, however, consumption is the key factor in an expanding economy.

As Adam Smith put it, production has consumption as its "sole end and purpose" (Bk. IV, Ch. VIII). Consumption is the end of production not only in being the reason for which production is undertaken but also in supplying the impetus by which production is energized. The main departure of the present account from Adam Smith in this regard is its treatment of desire for wealth as a factor operating in its own right, with no inherent

connection (via the “Invisible Hand”) to the common good.

Economic growth is keyed to increased consumption. Consumption, moreover, is stimulated by advertising and marketing. Continuing under the topic of *modus operandi*, we look in the next section at some marketing techniques that can be employed to induce consumers to buy more goods.

### **13.4 Consumer demand stimulated by marketing**

Marketing techniques are aimed at manipulating consumer behavior, with varying degrees of aggressiveness. Our discussion begins with familiar forms of advertising and proceeds to more aggressive techniques.

#### (a) Product presentation

In its simplest form, advertising is a matter of presenting a product to potential consumers. This might amount to nothing more sophisticated than simply making the product known. A product might be made known by word of mouth, by conspicuous labeling (e.g., a sign over a stall saying “Fresh Meat”), or by a simple description under “Classifieds” in a local newspaper. At this level, there is little concern to target specific groups of consumers. At the next level of sophistication, there is an effort to make the advertisement itself attractive to the consuming public. Examples in visual media include use of attention-getting formats (like bold type), bright colors, and pictorial illustrations. Auditory equivalents include special sound effects and “singing commercials.” These techniques are aimed at attracting notice to the ad itself, still without regard to specific audiences.

Another notch upward in manipulation comes with ads designed to compel attention, as distinct from merely inviting notice. Techniques of this general sort in use today include increasing the volume when ads appear on television, beginning movies with commercials for local businesses, and designing ads that feature people in distorted

(hence attention-getting) postures. As audiences become jaded by techniques like this, there is a tendency to raise their level of intensity (e.g., by adding more loud-speakers in movie theaters).

A natural extension of such techniques is adapting them to specific audiences.<sup>9</sup> Children in certain age groups are targeted by ads featuring cartoon characters (Pooh Bear, Ronald McDonald). Older children are addressed by ads depicting peer-group attitudes (think of Joe Camel—“Joe Cool”—now banned for being too effective). And young adults are typically responsive to ads showing movie stars and contemporary sports heroes. Not surprisingly, “senior citizens” are attracted to pictures of healthy-looking people noticeably younger than themselves, like those found in ads for certain medications.

Just as ads for playthings are found in maternity magazines, and ads for summer cruises in college alumni bulletins (but not vice versa), so there are preferred media for promoting endless varieties of other “special interest” products. A recent development along these lines has been the compilation of lists of mail-order customers with demonstrated interests in certain kinds of products. These lists can be sold not only to other retailers but also to fundraisers for various political and social causes.

#### (b) Preference Management

Advertising techniques like the above are basically ways of bringing products to the attention of potential buyers. A different dimension of manipulative skill comes into play when marketers attempt to shape the preferences of potential consumers to make them more receptive to particular products.

As might be expected, the transition from product presentation to preference management tends to blur on both sides. There is an element of preference management, for example, in the use of generational symbols (“Joe Cool,” healthy-looking middle-

aged people) to attract the attention of particular age groups. The effect of such techniques is not far different from that of designing packaging both to attract attention and to stimulate appetite for the product inside. Yet there is an important distinction between drawing attention to an advertisement and invigorating an appetite for the advertised product.

Preference management is a form of behavioral conditioning, and the procedures involved have been well established by behavioral science. As a classic example of behavioral conditioning, recall the case of the dog trained to salivate at the sound of a bell by repeated experience of that sound in conjunction with appetizing food.<sup>10</sup> If the conditioning is effective, the dog will respond to the bell with basically the same behavior (salivation) as previously elicited by presenting the food.

Similarly, when an adult male sees an ad picturing a particular car in the presence of a receptive-looking female, the response naturally elicited by the latter will become associated with the car as well. The reaction intended by the ad's designers is that the car itself will become another object of desire. In like fashion, when a young woman sees an ad showing men and women of her age having fun together while drinking a certain brand of beer, her normal desire to be part of a group like that is extended to include the beverage as well.

A more aggressive form of preference management takes over when advertising capital is used to create specific "needs" that are conveniently satisfied by the product in question. A familiar example is the original offering of Coca-Cola, which contained an addictive substance (subsequently removed from the drink, although its name was retained). The natural appetite on which the soft-drink industry is based today is a craving for sweets, which humans share with bears, a few birds, and many insects (sweet substances are a common source of energy). But there is no natural desire for sugar-water of one or another particular taste. Now that soft drinks have been established as

part of the human diet,<sup>11</sup> marketing efforts of the suppliers have been devoted to making their flavors more appealing than competing flavors. Here is a clear example of using advertising budgets to create “needs” with which consumers had not previously been burdened.

Another example of recent note is the marketing of video games, and of various other ways of spending time with computers. The computer industry has spent billions of dollars convincing people they need computers and computer software for uses they had not dreamed of previously. The so-called “electronic age” might come to be recognized less as a landmark in the progress of human knowledge than as a testimony to the skills of preference managers.

### (c) Neuromarketing

The next breakthrough in preference management may come with an application of neuroscience to marketing, aptly dubbed “neuromarketing.” In experiments employing MRI (Magnetic Resonance Imaging) scanners, devices normally used to look for tumors, researchers have discovered specific regions of the brain associated with product preference. By studying correlations between brain responses and marketing stimuli, neuromarketers have been able to tell what aspect of an advertising presentation (e.g., color of box, brand name) consumers find attractive. Their intent is to apply information about brain activity to increase the effectiveness of brand-loyalty and other advertising campaigns.<sup>12</sup>

Although different brain sectors have been involved in different experiments, the key regions appear to be the nucleus accumbens, which activates with the anticipation of pleasure, the insula, associated with unpleasant experiences, and the medial prefrontal cortex, which is implicated in mediating the effects of pleasant and unpleasant stimuli. The general idea seems to be that when the anticipation of pleasure set up by a product

display outweighs the associated displeasure (e.g., the monetary costs), the consumer is ready to buy the product. When displeasure dominates, the product is rejected.

One widely-reported study<sup>13</sup> at Baylor College of Medicine involved more than 5 dozen people who underwent brain scans in a taste comparison between unlabeled Coca-Cola and Pepsi-Cola. Half the subjects choose Pepsi, which also registered a stronger response than Coke in the pleasure centers of those who choose it. But when the subjects were told which cola they were drinking as part of the test, about three-fourths chose Coke for its perceived better taste. These results may reasonably be interpreted as showing that the Coca-Cola brand name elicited an anticipation of pleasure beyond that associated with its actual taste, for reasons having to do with a history of successful marketing.

In another study conducted for DaimlerChrysler at Ulm University, Germany, a dozen male subjects were shown pictures of sports cars, sedans, and smaller cars, and asked to evaluate them for attractiveness. Not only did all subjects rate the sports cars higher, but the brain areas activated by the pictures of these cars were the same as those activated by other pleasure-inducing stimuli like sex and cocaine. A likely explanation is that these particular subjects had been previously exposed to numerous ads showing sports cars in the presence of sexy models, and that this association had been internalized in the pleasure centers of their brains.

Results like these seem to vindicate certain long-established techniques of advertising mentioned above by disclosing some of the neuromechanisms that make them effective. Such results also show that successful marketing plays more to the emotions than to principles of rational choice, like those long dear to mainstream economists. Although it is yet unclear whether research of this sort will lead to radically new marketing techniques, it at least enables marketing firms to find out when their ads are arousing interest and to adjust them for maximum consumer response.

Despite its uncertain future, programs for neuromarketing research are currently underway in many major universities,<sup>14</sup> often with support by corporate sponsors. And several marketing agencies now offer neuromarketing services to their clients. Among major firms known to have taken advantage of such techniques are Ford, DaimlerChrysler, Coca-Cola, Proctor and Gamble, and Motorola.

### **13. 5 How consumption contributes to ecological destruction**

Thus far in this chapter we have seen how economic production is driven by desire for wealth, how growth in production of goods is dependent on increased consumption, and how consumption is stimulated by various kinds of marketing. Earlier in this study we saw that production of economic goods takes in negentropy and puts out entropy in the form of various types of ecological degradation. It follows that increased consumption, by way of enabling increased production, results in greater amounts of entropy being discharged into the biosphere. This entropy is the nub of our environmental crisis.

To make this complex set of interactions more perspicuous, it will be helpful to represent them in the form of a diagram.

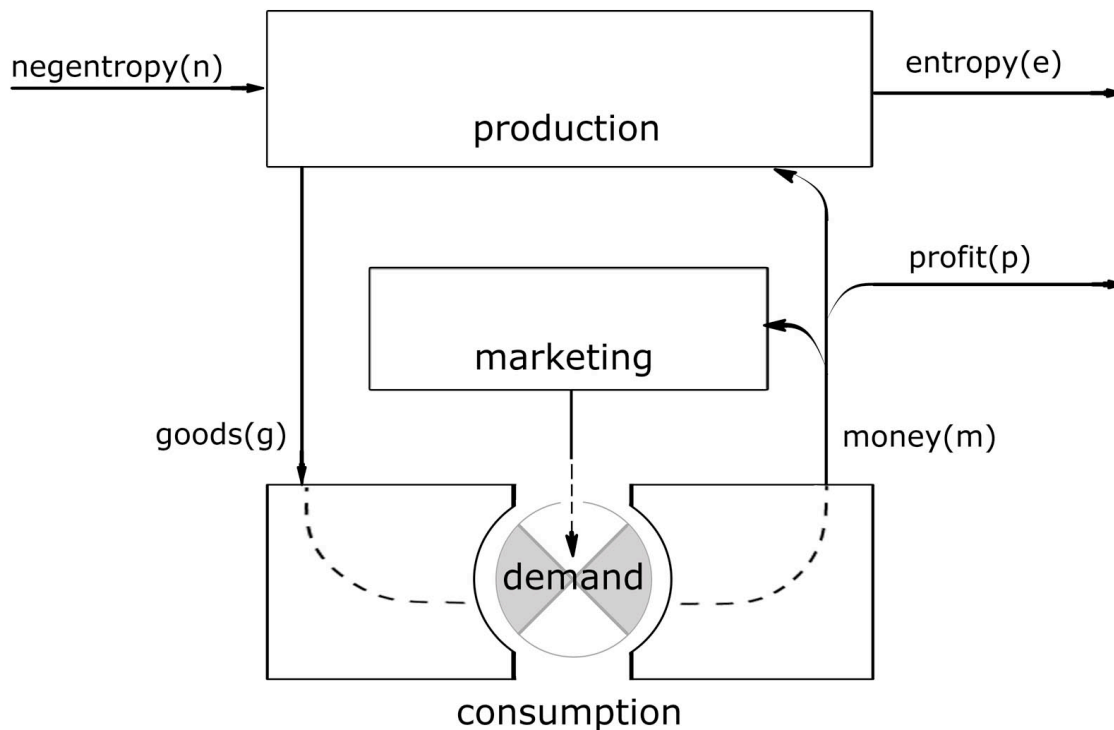


Figure 13.1: Generation of wealth in a market economy

The process of production is represented at the top of the figure as a “black box” with two inputs and two outputs. One input is the negentropy ( $n$ ) going into production of goods, and one output the entropy ( $e$ ) resulting from that production. This part of the production process is primarily physical. The other output is the flow of goods ( $g$ ) to the consumer, the other input the portion of money ( $m$ ) from the sale of those goods that goes back into the production process (capital investment, etc.). In relevant respects, this part of the overall process is economic.

The configuration representing the consumption process at the bottom is left open in the middle to show a motor-like component providing the “sucking” action (section 13.3) that draws goods from the producer and sends out a flow of money in the other direction. This “motor” represents consumer demand. The flow of money it sets up splits into three branches: (i) money reinvested in production (capital improvement, etc.),

(ii) money retained as profit, and (iii) money diverted into advertising and marketing. This configuration should be viewed as a “black box” as well, leaving many features of the consumption process unrepresented. Among such are sources of money spent on consumer goods (e.g., wages), which may include profits (p) rejoining the money flow.

The marketing sector, also represented by a “black box,” responds to the influx of funds (iii) with activity designed to stimulate consumer demand. This influence is represented by the line directed to the center of the “motor,” signifying the tight coupling between demand and marketing. Among details unrepresented here are various marketing techniques (section 13.4) that might be employed.

These basic components in place, let us extend our reading of the figure by assigning quantitative significance to the three lines (n), (e), and (p) at the periphery. A lengthening of (p) indicates increasing profits, and similarly for lines (n) and (e). With this provision, we can symbolize lesser and greater amounts of these three factors.

Let us now imagine a “behind-the-scene” manager setting the whole system in motion with the intent of maximizing profits. While making sure that reinvestment is adequate to keep the factories running, the invisible manager adjusts expenditures on marketing to achieve maximum profits symbolized by extension of line (p).<sup>15</sup> By maximizing (p), the skillful manager enables a generous return on investment and secures more income for personal use.

While manipulating distribution of funds among reinvestment, marketing, and profit, the manager will be unconcerned with quantities (n) and (e). Given its role in the system, however, increasing expenditure on marketing causes the “motor” that powers consumption to draw more goods from the production sector. This in turn increases both the quantity of negentropy (n) brought into the system and the quantity of entropy (e) discharged into the environment.

Taking all these interactions into account, we can visualize the effect of the

manager's manipulations on factor (e). The more profit the manager gets out of the system, the more entropy the system discharges into the environment. In terms of the symbolism of Figure 13.1, extending line (p) brings about an extension of line (e) as well. In terms of real-world consequences, greater profits generated by a free-market economy results in more damage inflicted upon its supporting ecosystem.

The behind-the-scene manager in this thought experiment personifies the desire for wealth by which economic growth is driven (section 13.2). Motivated by this desire, the invisible manager sets in motion a series of causes resulting in ever more grievous ecological damage. Figure 13.1 thus illustrates how desire for wealth leads to increased consumption, how increased consumption leads to economic growth, and how economic growth leads to further degradation of the biosphere.

Highly abridged as it is, Figure 13.1 unavoidably leaves other relevant factors out of account. There are other ways managers can stimulate consumer demand (e.g., designing better products), other ways desire for wealth can affect the economy (e.g., through investments), and so forth. The purpose of the figure, however, is not to depict a complete economy but rather to show the connection between corporate profit and economic expansion. By extension, it also traces out the connection between desire for wealth and ecological destruction.

### **13.6 Limiting marketing's influence on consumer demand**

One task set for this chapter was to identify the factors responsible for economic growth and to explain how they operate in a free-market economy. Figure 13.1 responds to this purpose. An ensuing task is to locate a factor that might conceivably be altered as a means of curtailing economic growth. The figure assists in this task as well.

At the heart of the interactions diagramed in the figure stands marketing with its influence on consumer behavior. This influence is symbolized by the arrow directed

downward from the marketing box. Without this connection between marketing and demand, marketing has no influence on other factors depicted in the diagram. Without this connection, the invisible manager (personifying desire for wealth) would have no way of manipulating consumer behavior to maximize profits. Thus disconnected from the causal sequence between consumption and production, desire for wealth lacks capacity to spur economic growth.

One way of curtailing economic growth, accordingly, is to restrict the effect of marketing on consumer demand. A medical analogy is tubal ligation of a female kitten to remove her from the breeding population. By “tying the tubes” through which marketing engenders increased demand, as it were, desire for wealth on the part of corporate managers might effectively be thwarted.

At first glance, this may sound like a rather far-fetched proposal. There are conceivable circumstances, nonetheless, under which restrictions like this might actually be imposed. During the height of communism in Poland, for example, commercial advertising was entirely prohibited.<sup>16</sup> There are other cases in which advertising has been restricted for moral (as distinct from political) reasons. Thus contemporary Albania prohibits advertisements “that are contrary to human dignity and moral principles,” such as any that “encourage pornography and violence.”<sup>17</sup> One can imagine a society in which commercial advertising is considered “evil”<sup>18</sup> and universally forbidden on ethical grounds.

Although banning marketing for ethical reasons is a conceivable course, the restrictions called for in present circumstances would not be so far-reaching. For our purposes, indeed, some kinds of advertising would remain in place as both needed and beneficial. This is so in particular with the less aggressive forms of product presentation discussed previously (section 13.4 (a)). What call for restriction are ads aimed at creating new consumer “needs,” notably ads under the category of preference management

(section 13.4 (b)).

Let us return briefly to these two kinds of marketing, with an eye toward how they influence consumer demand. In its simplest forms, product presentation addresses needs that already exist. Regardless of their state in life, people need food, shelter, and clothing, along with tools and utensils for managing their daily affairs. These may comfortably be described as genuine needs. When suppliers can offer products that meet such needs, presenting these by non-manipulative advertising is a way of making them known to potential consumers. This kind of advertising thus benefits producers and consumers alike.

In their more pernicious forms, by contrast, techniques of preference management are aimed at creating new appetites for the consumer to satisfy. An obvious example discussed previously is the highly flavored sweet water known as “soda pop.” Other examples are “brand name” clothing and various electronic gadgets that marketers have made into signs of privilege which people purchase to enhance their self-esteem. Apart from the influence of marketers in shaping our preferences, there is nothing about soda pop or designer clothing that anyone really needs. The primary beneficiaries here are the marketers and the businesses that hire them. What the consumer gains is little more than temporary relief from an artificial “need” that is never completely satisfied.

Even worse, consumption of products designed to gratify artificially induced “needs” often are detrimental to the consumer’s health. The corn syrup used to sweeten soda pop, for instance, is a major contributor to obesity; and the fried fat that makes potato chips tasty is a leading cause of clogged-up arteries. Another negative consequence of manipulative marketing is that consumers are left with more things to want, and are more subject to discontent when these wants go unsatisfied. All in all, techniques of preference management benefit the corporate producer at the expense of the consumer whose tastes are being manipulated.

Not coincidentally, preference management is the kind of marketing that contributes most substantially to economic growth. Product presentation helps satisfy the real needs of a populace by putting potential consumers in touch with suppliers who can meet those needs. But once this relatively modest set of needs have been met, increased economic growth would hinge on increased population. Growth from this source would not be enough to slake the insatiable desire for wealth on the part of investors and corporate managers. The sort of marketing that swells dividends and corporate salaries is the sort that relies on the creation of new consumer “needs.” By catering to the desire for corporate profit, preference management not only exploits the consuming public; it also lead to higher levels of economic growth and hence to more extensive environmental damage.

Returning to the arrow of Figure 13.1, we now see that the restrictions on marketing required to curtail economic growth do not apply to all forms of marketing indiscriminately. What should be restricted is the kind of marketing that stimulates consumer demand for products that are not really needed, and that often works to the consumer’s detriment. As just noted, this also is the kind of marketing that feeds economic growth, with its resulting devastation of our natural environment.

The obvious question at this point is what anyone can do to help rein in marketing practices of the offending sort. This is not an easy question; and the answer will emerge only gradually through the remaining chapters of this study. By way of anticipation, it may be said that a key part of the answer has to do with making the consuming public *unresponsive* to the kind of marketing in question.

Think of it this way. Consumers have responded favorably to manipulative attempts to establish a market for sweetened water because they attach a positive value to pleasurable experiences. If they didn’t value pleasure, they wouldn’t buy pleasant-tasting liquid that is bad for their health. Similarly, people buy brand-name clothing because

they value the favorable notice they attract by wearing it. If people didn't value being the center of attention, marketers could not sell designer clothing by appealing to the approval it will attract from their peers.

Preference management works only to the extent that the product being pushed offers something the consumer has learned to value. Without values of the relevant sort in place, the potential consumer will not respond to the marketer's stratagems.

As matters stand, economic growth depends on the success of manipulative marketing, which in turn depends on the presence of supporting consumer values. A shift to a less supportive set of values would contribute to the curtailment of economic growth. If this line of thought proves sound, the path toward a resolution of our environmental crisis may lie in the direction of value change.<sup>19</sup>

#### Notes

1. We are not looking for one or another particular sector of a given economy that happens to be "driving" that economy at a particular stage in its history. By way of illustration, consider the title of a recent report of the World Bank: "The Private Sector Drives Economic Growth" (<http://www.worldbank.org/devoutreach/march03/textonly.asp?id=1881>; accessed March 2009). Another report released by the U.S. Commerce Department about the same time was headed "Defense Spending Drives Economic Growth" ([http://www.epi.org/economic\\_snapshots/entry/webfeatures\\_snapshot\\_archive\\_08132003](http://www.epi.org/economic_snapshots/entry/webfeatures_snapshot_archive_08132003); accessed March 2009). Other "growth-driving" factors one reads about are research, spending on higher education, and electronic payments. Our concern is with the driving principle of economic expansion generally, rather than with areas that are particularly active from period to period.
2. For instance, see Peter J. Bowler's *Evolution: The History of an Idea* (University of

California Press, 2008), p. 103.

3. *The Entropy Law and the Economic Process*, p. 323. G-R mentions J.S. Mill as one economist maintaining this position.

4. An individual can become wealthy by inheritance or thievery; but these are not sources of wealth in the sense intended. Another source that might be suggested is the mining of precious metals. But precious metals do not constitute wealth until they enter the economic process (e.g., are made available for sale), which means that mining by itself (apart from economic activity) is not an independent source of wealth. Military conquest likewise is not a source of wealth, being rather the forceful acquisition of wealth that already exists.

5. In Bk. 1, Ch. XI, Pt. II of *The Wealth of Nations*, Adam Smith observes that, in contrast with the desire for food, desire for conveniences and most amenities requiring purchase “seems to have no limit or certain boundary.” In Chapter II of *The Theory of the Leisure Class*, Thorstein Veblen states that “the desire for wealth can scarcely be satiated in any individual instance,” and certainly cannot be satiated in humanity taken generally. John Maynard Keynes, in *Essays in Persuasion* (New York, Norton, 1931), observes that needs associated with an individual’s desire to feel superior (i.e., those served by wealth) “may indeed be insatiable.” It may be noted that George Reisman makes a virtue of the limitless desire for wealth in his recent *Capitalism: A Treatise on Economics* (Jameson Books, Chicago, 1996).

6. Other possible factors are national commitment to military might, which requires a strong economic basis, and ideologically based development programs like the Soviet Union’s Five Year Plan in the late 1920s. It should be understood that this discussion of the desire for wealth is not focused on free-market to the exclusion of so-called managed economies. Not only are most economies today a mixture of both, but moreover even managed economies are influenced by desire for wealth.

It would be naïve to assume that the substantial increases in GNP recently achieved by Communist China, for example, have not been motivated by a desire for self-aggrandizement on the part of its economic planners.

7. See <http://economics.about.com/library/glossary/bldef-economic-good.htm> (accessed August 2007).

8. There is a substantial body of literature on what is often called “Say’s Law” (after Jean Baptiste Say, 1767-1832), sometimes paraphrased “supply constitutes demand.” This makes sense only under the gloss that supply of goods already in demand creates demand for other goods <http://www.benbest.com/polecon/sayslaw.html> (accessed February 2009).

9. A step closer to the “advertiser’s dream of sending a particular commercial to a specific consumer” is announced in the *New York Times* of March 4, 2009.

10. This is known as respondent (Pavlovian) conditioning, as distinct from operant (Skinnerian) conditioning. In this example, the conditioned stimulus is the bell’s sound, the unconditioned stimulus the food, and the conditioned response the dog’s salivation.

11. A reasonable guess is that soft-drink machines can be found today in almost every country with electrical power to run them. In countries like the U.S. that support their impoverished residents with cash payments, a sizable portion of that money is spent on “soda pop.”

12. Information in the section comes from numerous web sites, including <http://www.neurosciencemarketing.com/blog> (accessed February 2009), <http://internettime.com/blog/archives/000998.html> (accessed February 2009), <http://www.neurosciencemarketing.com/blog/articles/brain-scan-buying.htm> (accessed February 2009), <http://www.nytimes.com/2007/01/16/science/16tier.html> (accessed February 2009), and <http://www.wisegeek.com/what-is-neuromarketing.htm> (accessed February 2009).

13. Published in *Neuron*, October 14, 2004.
14. In addition to Baylor and Ulm mentioned previously, universities with research programs in neuromarketing include Emory, Duke, Yale, Carnegie Mellon, MIT, Stanford, Johns Hopkins, Pittsburgh, and University College London, among others. Research in neuromarketing began in the late 1990s in the Marketing Department of Harvard University.
15. This amount can be substantial. In 1910, 4 percent of the U.S. national income was spent on advertising. By the end of the century, the \$600 million spent on advertising in 1910 had climbed to more than \$120 billion, out of a total of \$250 billion worldwide. See Richard H. Robbins, *Global Problems and the Culture of Capitalism* (Allyn and Bacon, Boston, 1999), pp. 15-16.
16. See <http://www.arts.gla.ac.uk/Slavonic/Epicentre/Marta%20art.htm> (accessed February 2009) and <http://www.idrc.ca/en/ev-28838-201-1-DO-TOPIC.html> (accessed February 2009).
17. See [http://pcmlp.socleg.ox.ac.uk/transition/issue2\\_3/koci.htm](http://pcmlp.socleg.ox.ac.uk/transition/issue2_3/koci.htm) (accessed February 2008).
18. Well known people who have denounced advertising as evil (with various qualifications) include C.P. Snow, Arnold Toynbee, Nye Bevan (a Welsh socialist), Malcolm Muggeridge (an English conservative), and Pope John Paul II. For sources, see Eric Clark, *The Want Makers: The World Of Advertising: How They Make You Buy* (Viking Penguin, New York, 1988), pp. 371, 393).
19. This chapter was written before the U.S. “officially” entered recession in the last half of 2008 (with GDP declining 0.5% in the third quarter and 6.2% in the fourth; see <http://www.dea.gov>). The growing consensus among experts is that this retraction was due first and foremost to reckless investment driven by greed on the part of the nation’s major financial institutions. Among many dire consequences, the recession has resulted

in massive loss of jobs and a corresponding decline in consumer spending. This sequence of events supports the thesis developed in section 13.2 that free-market activity is driven primarily by desire for wealth. It also ties in with the underlying theme of sections 13.6 and 14.5, to the effect that economic production goes hand in hand with consumer spending. Although this particular downturn was not caused by a decline in consumer spending recovery efforts by the Obama Administration have focused on stimulating spending as a means of getting the economy up and running again. A more complete discussion of the current recession and its ramifications for the present study may be found in the postscript.