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DISSERTATION

VIRTUAL SCARCITY: THE EVOLUTION OF IMBALANCE AND ITS IMPACT ON SOCIETY AND THE ENVIRONMENT

Submitted by

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Economics

In partial fulfillment of the requirements

For the Degree of Doctor of Philosophy

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WE HEREBY RECOMMEND THAT THE DISSERTATION PREPARED UNDER OUR SUPERVISION BY TERREL A. GALLAWAY ENTITLED "VIRTUAL SCARCITY: THE EVOLUTION OF IMBALANCE AND ITS IMPACT ON SOCIETY AND THE ENVIRONMENT" BE ACCEPTED AS FULFILLING IN PART REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY.

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ABSTRACT OF DISSERTATION

VIRTUAL SCARCITY: THE EVOLUTION OF IMBALANCE AND ITS IMPACT ON SOCIETY AND THE ENVIRONMENT

This study examines the historic, cultural, and institutional roots of social-provisioning biases of modern capitalist society that create a profound tendency towards the social creation and perpetuation of scarcity. Though socially unfulfilling and ecologically damaging, the scarcity disposition coordinates society in such a way that ever-increasing production becomes the most believable solution to society's ills.

This study explores concepts of scarcity from classical economists to modern writings on thermodynamics and ecological constraints. It shows that modern scarcity has more to do with the lack of balance between social and material progress envisioned by Mill, Godwin, and Condorcet than it does with the constraint on progress envisioned by Malthus and Ricardo. *Social articulation* and *ecotones* are used to examine the causes and consequences of this lack of balance.

Social articulation, as introduced by this study, is the way individuals evaluate the world and express their desires in a fashion considered appropriate and which coordinates social provisioning. These patterns of evaluation and expression are, to a large degree, social in their origins and consequences. There is a *contradiction* in our society's prevailing social articulation. Its key elements, like individualism, acquisitiveness, and

materialism, make society enormously productive in the material sense while simultaneously cultivating feelings of insufficiency even in the midst of affluence.

This research also introduces the concept of ecotones to the study of economics. In ecology, ecotones are the conjuncture of two or more ecological systems. As with ecology, the conjunctions found in economics provide both a unique set of incentives and a locus for a great deal of activity. While biophysical ecotones have shaped economic anthropology and economic geography, more abstract ecotones between systems of value and between other institutions also shape the economy. Specifically, social articulation creates an ecotone between readily articulated commercial values and muted non-commercial values. The asymmetry in articulation favors commodities, allowing the market to encroach upon a greater share of our lives. This intensive and extensive growth in the role of commodities, at the expense of other things of value, at once drives production and perpetuates the construction of scarcity.

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Dedicated to my wife, Julie,

and my parents, Guy and Carol,

for all their love and support

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Chapter 1: Imbalance and the Construction of Scarcity

It is only in the backward countries of the world that increased production is still an important object: in those most advanced, what is economically needed is a better distribution.

—John Stuart Mill

Ubiquitous dissatisfaction in the midst of unparalleled affluence is a paradox that needs explaining. The point should not be exaggerated, society is not outrageously unhappy. However, more than one observer has commented on the ennui and imbalance that characterize our society. David Korten (1995, 21), for example, talks about a global crisis of "deepening poverty, social disintegration, and environmental destruction," and Maria Mies mentions "deep feelings of malaise, even of despair and poverty in the midst of plenty" (1993, 133). Heilbroner (1974) talks about civilizational malaise, while Wachtel (1983) offers a lengthy examination of the *Poverty of Affluence*. "Amidst all the wealth, all the might, and all the knowledge of democratic industrial society," observes Stanfield, "its citizens despair of the future and bear guilt for the world their children will inherit" (1979, 99).

It is startling enough to find that malaise and affluence are such tight companions. Yet, the truly striking thing about the angst of prosperity is that it is most often manifested and expressed as a desire for more things. It is odd, and somewhat counter intuitive, that a society that possesses the most should be the most possessed about the insufficiency of its

provisions. However, this phenomenon is fundamentally characteristic of capitalism and can best be summed up by the word *scarcity*. Scarcity is dissatisfaction manifested as the peculiar desire for more stuff. There is no need for the definition of scarcity to be referential to means. Dissatisfaction and a resulting desire for more things are the necessary and sufficient conditions for scarcity. To speak of limited means in this regard is both superfluous and misleading. This book is an inquiry into the creation and perpetuation of scarcity so defined. Daily, we are confronted with the material and cultural affluence of society, the beauty and complexity of nature, and the infinite wonder of the universe. To all this, our primary response is a coarse yearning for more stuff. This yearning must be explained rather than taken for granted or assumed in our economic models as inevitable.

For a watery chunk of mostly magnesium, nickel, and iron orbiting one of a hundred billion suns that form one of innumerable galaxies careening through the universe, earth is an extraordinary place. It is a place of tremendous activity and change. Currently its six billion people annually produce over 6.25 billion tons of carbon emissions and 70.7 million tons of sulfur emissions while consuming 12.6 million hectares of tropical forest and over eight billion tons worth of fossil fuels (Brown, *et al.* 1997). The US alone generates over 180 million tons of solid waste. The planet is also steadily growing more homogeneous. Each year, an estimated 50,000 species are driven to extinction, and half the world's remaining languages will likely suffer the same fate in the coming decades (Brown *et al.* 1997b, 13). Millions of years' worth of biodiversification and thousands of years' worth of cultural diversification will be wiped out in a single generation. Such globally significant problems are increasingly common. Every part of the planet, from Antarctic ice to Amazonian forests, contains traces of man-made toxins. The planet's ozone layer is an

invaluable resource made famous by its own ongoing destruction, and global warming—with its accompanying host of floods, famines, droughts, and pest invasions—has grabbed popular attention with its promise of being the greatest slow-motion disaster of all times.

The stunning thing about all of this activity, human effort, and change is that its overall effect on social welfare is somewhat ambiguous. The bulk of this activity cannot be explained by the production of goods most commonly linked with social welfare, and empirical studies point to a shockingly poor relationship between happiness and economic growth. Many people would scoff at doubts surrounding the global economy and quickly point to indicators of progress all over the globe. Typically, these indicators include things like diet, life expectancy, literacy rates, and even fertility rates (See, e.g., Easterlin, 2000). Diets have improved for many, but there are at least 1.2 billion people in this world who are underfed, and another 1.2 billion who are over fed (Brown *et al.*, 2000, 60). Poverty, not scarcity, is the usual cause of hunger; "nearly 80 percent of all malnourished children in the developing world in the early 1990s lived in countries that boasted food surpluses" (Brown *et al*, 2000 64). Meanwhile, the US wasted, in just one year, 96 billion pounds of food—27% of its food supply (Kantor *et al.* 1997, 3). Life expectancies are on the rise, but that is on the back of a sharp fall during the start of the industrial revolution. The US, with all its affluence and its extravagant expenditures on healthcare, does not even place in the top 20 for life expectancy. At the other end, there is the damning reality that Malawi, Zambia, Swaziland, and Zimbabwe all have life expectancies less than 40 years (Brunner 1999, 152). Moreover, it would be sheer nonsense to believe the bulk of economic activity, mentioned above, goes towards simple factors that promote health. Only a small fraction of gross world product goes towards ensuring adequate diets, safe drinking water, and basic

vaccinations. While incurable HIV/AIDS is a growing problem and one that is devastating large parts of Africa, tuberculosis and diarrhea each kill more people (Brunner 1999, 374). In 1997, 10 million children under the age of 5 died (374). Roughly half such fatalities are associated with malnutrition; at least 2 million per year could be prevented by existing vaccines (374). Similarly, high literacy rates are an indicator of progress and a justifiable source of pride. However, teaching people to read does not demand great resources; countries like Chile (95%), Argentina (96%), South Korea (98%) and desperately poor North Korea (100%) have literacy rates that compare to that of the US (97%) (Brunner 1999).

We see other odd imbalances. We are proud of our high incomes and luscious lawns, but we are horrified to learn one of the things affluent suburbia can produce is children who are commonly disenchanted and occasionally terrorists and mass murderers. If the world is not overly aggressive combating hunger and preventable disease, at least it does spend a lot of money on automobiles. Global production of automobiles exceeds 36 million per year (Brown, et. al., 1997, 74). A single company, General Motors, had revenues that exceeded $176 billion; a single oil company, Exxon, had revenues exceeding $163 billion.[1] All too often, though, these cars are just big expensive places to sit while waiting in traffic. "Congestion in the United States accounts for $100 billion in wasted fuel, lost productivity, and rising health costs" (Brown, et. al., 1997, 74). Similarly, the average Bangkok worker "loses the equivalent of forty-four working days a year sitting in traffic" (Korten 1995, 284). Americans spend lavishly on food and on products to help them lose weight, on tobacco and cancer treatment. They work long hours so they can afford to buy

[1] Figures based on *Fortune* magazine's *Global 500* for the year 2000.

the things they think they need, while over $2,000 per household is spent on advertising to remind them of these needs.[2]

Still, the root of many of these disparities is the imbalance between affluence and happiness. Durning (1992, 38), for example, cites studies that indicate that, regardless of their current level of income, people, rich and poor alike, feel they could be happy if only they had twice as much as they actually do. Though we dedicate our lives and even our countries to the pursuit of happiness, our progress towards this goal is so poor that, if it exists, it defies confirmation. "There is no reason to suppose," argues economist and Nobel laureate Ronald Coase, "that most human beings are engaged in maximizing anything unless it be unhappiness, and even this with incomplete success" (1988, 4). In this context, Coase approvingly quotes the eminent economist Frank Knight: "The things we work for are 'annoyers' as often as 'satisfiers,' we spend as much ingenuity getting into trouble as in getting out" (1988, 4).

Empirical evidence on happiness confirms that the impact of economic growth is ambiguous. In a famous survey of the economics of happiness, Richard Easterlin (1973, 1974), building on the work of Abramovitz (1959), showed an important cleavage between happiness and economic growth. Admittedly, for an individual in a particular country at a particular point in time, greater affluence typically meant greater happiness. However, Easterlin demonstrated that "*raising the incomes of all does not increase the happiness of all*" (1973, 4, his emphasis) and that "Richer countries are not typically happier than poorer ones" (1973, 7). While, in each of the 30 countries examined, income and happiness were positively linked (1973, 6), the evidence suggested that relative, not absolute, incomes were

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[2] Figure based on advertising expenditures collected by *AdvertisingAge* and demographics from the

the important factor. Being richer than one's cohorts lends itself to happiness, but if a rising tide lifts all ships, it is possible nobody will be happier. Since it is logically impossible to simultaneously raise everyone's relative income, the virtue of economic growth is eroded by aggregation. Higher aggregate incomes, whether across time or across countries, could not be linked to happiness. Modern affluent societies were not systematically happier than they were in the past or compared to poor countries. "By and large" concludes Easterlin, "the evidence indicates no relation—positive or negative—between happiness and national income" (1973, 7).

This "Easterlin Paradox" is illustrated by data gathered by the General Social Survey (GSS). This annual survey of households used personal interviews to gather responses on a wide variety of topics. For one question, respondents were asked to rank themselves as "very happy," "pretty happy," or "not too happy." Between the years 1972 and 1996, over 35,000 households answered this question. The percent of respondents reporting being *very happy* is fairly flat at about a third of the responses.[3] When compared to the general rise in real income, it would be difficult to argue that economic growth helps spread happiness. Indeed, as shown in *Figure 1*, the weak correlation that exists between real GDP and the percent of very happy households is negative. Similarly, when viewed across the years, there is also a weak, inverse relationship between the real value of each respondent's reported income and the percent stating they were "very happy."

This ambiguity is troubling. Economic growth is a difficult and costly affair. The presumed link between rising affluence and welfare is at the heart of our individual and

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US census.

[3] Responses for *pretty happy* and *not too happy* were also fairly flat at around 55% and 11% respectively.

collective economic decisions. Pollution, extinction, time spent away from family and friends, toil, and turmoil are serious considerations. They are, we reason, the sacrifices necessary to ensure growing happiness for ourselves and all those we care about. This book argues that we, as individuals and as a society, tend to overestimate the value of economic growth while undervaluing its costs.

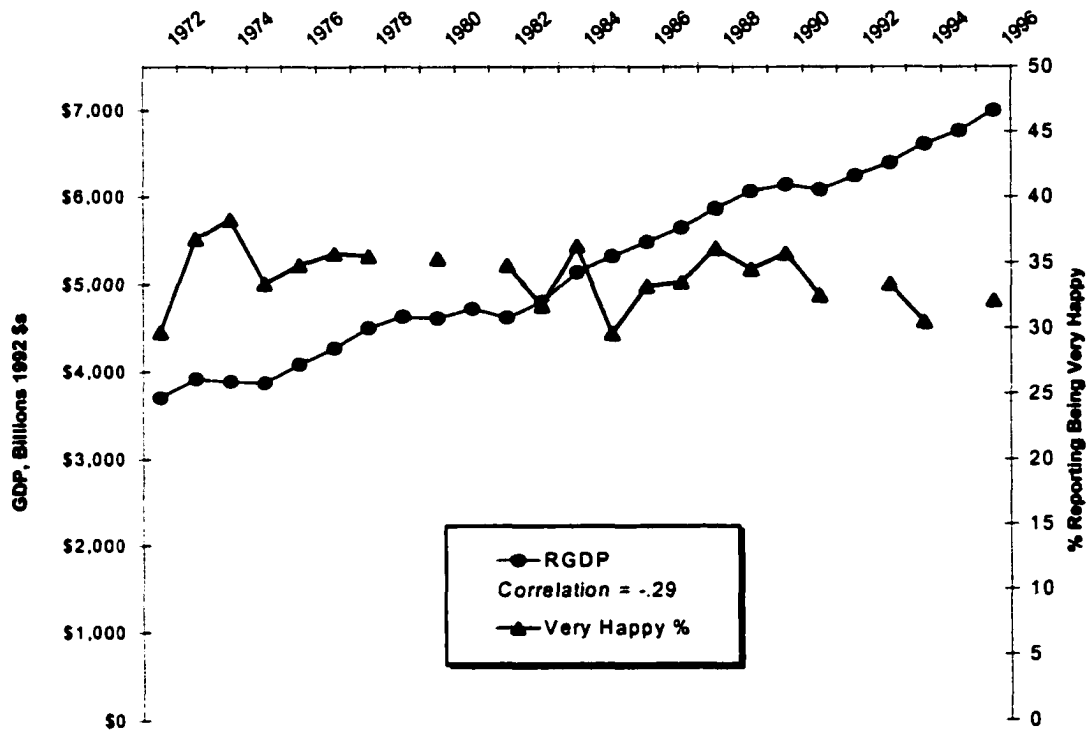

Figure 1: Happiness and RGDP[4]

To argue that our assessment of economic growth is skewed in its favor is not to deny its substantial and genuine achievements. For there really is incredible affluence. Over the last couple of centuries, much of the world has enjoyed a relentless march away from hunger, disease, and ignorance. Hundreds of millions of people can now afford the

[4] GSS data found at http://www.icpsr.umich.edu/GSS/ and are not available for 1979, 81, 92, and 95.

kind of health care, extravagant diets, education, and travel that would have been the envy of royalty a few generations ago. Vaccines and antibiotics have prevented unfathomable amounts of suffering. A billion people can join together in watching the same sporting event. Miracles such as those that let us read at night, take a hot shower, keep our houses comfortable all year long, safely store food, or talk to people thousands of miles away are now so common that they are taken for granted in many parts of the world. Has circumstance changed so much that there is a need to abandon the greatest mechanism for material improvement ever witnessed?

Certainly, past benefits provide a small and inadequate part of the picture. The issue, as many economists would see it, is whether losses are systematically weighed against what is gained in such a way as to ensure genuine and sustainable improvements in general welfare. In market economies, many argue, the price mechanism provides the requisite scale. However, reliance on the price mechanism certainly takes place in the context of broader mores and habits of thought. It is this broader pattern of social thought that permits the market to play such a large role in shaping families, society, and the environment. This book evaluates this pattern of thought to see whether a bias exists that would tip the scales and prevent an adequate accounting of the social and environmental costs of economic behavior.

Regardless of whether or not one finds recent economic progress to be wanting, we may reasonably inquire into prospects for progress and wonder if there is a more effective way of elevating social welfare. The debate over the pace and the verity of recent progress derives most of its significance from these more forward-looking concerns. This inquiry into progress will examine both the economy's constraints and our ability to articulate and

pursue happiness and other ends. The latter question is particularly important because it is too often overlooked. The debate should not be limited to those who deny any urgent problems and those who warn that population and resource pressures threaten doom. Perhaps our dislike for crowds and early parenthood may do more than famine in curbing population. Perhaps the good life is not the goods life. Perhaps leisure and contemplation can contribute as much to social welfare as do moving and shaking. Significantly, these types of questions are timeless. It is horribly wrong to think environmental concerns are prompting a search for a second-best mode of production. While environmental concerns may provide the impetus, there is always sufficient cause for wondering about the nature of happiness and of a good society.

Aristotle on Roots of Welfare

Aristotle, for example, was little concerned with global warming, the ozone layer, or the difficulty of provisioning six billion people. He did, however, wonder about what makes for a good man and a good society. His answer, oddly enough, did not involve the unfettered exponential increase in commodities. Neither was it found in the dogged pursuit of wealth. "The life of money-making," argued Aristotle, "is one undertaken under compulsion, and wealth is evidently not the good we are seeking; for it is merely useful and for the sake of something else" (*Nicomachean Ethics* 1096a5-7). Instead, Aristotle started by wondering if the things we do have an ultimate end or purpose. Certainly, we do many things towards many ends, but usually these ends are subordinate to a higher, broader purpose. There must be, however, something we desire for its own sake—not for the sake of something else. If this were not the case, Aristotle reasoned, and everything we did was for the sake of something else, "the process would go on to infinity, so that our desire would

be empty and vain" (*Nicomachean Ethics* 1094a20-21). That which is good in itself, and not in reference to other things, must then be the chief good. His next step was to identify this good and determine how best to achieve it:

> Shall we not, like archers who have a mark to aim at, be more likely to hit upon what is right? If so, we must try, in outline at least, to determine what it is, and of which of the sciences or capacities it is the object (*Nicomachean Ethics* 1094a23-27).

Aristotle believed the highest most comprehensive end, the one that all others contributed to, was happiness:[5]

> honour, pleasure, reason, and every virtue we choose indeed for themselves (for if nothing resulted from them we should still choose each of them), but we choose them also for the sake of happiness, judging that through them we shall be happy. Happiness, on the other hand, no one chooses for the sake of these, nor, in general, for anything other than itself (*Nicomachean Ethics* 1097b2-6).

Such a statement, he recognized, is a mere platitude unless one explains what they mean by happiness. What does one need, or need to do, in order to be happy? Certainly some amount of friends and riches and beauty are important, but they are not enough to bring us to the mark. They are enormously helpful but not sufficient. Aristotle concludes happiness comes from being fully human, by doing what no other living being can—living the life of reason. "Human good turns out to be activity of soul in accordance with virtue, and if there are more than one virtue, in accordance with the best and most complete" (*Nicomachean Ethics* 1098a16-18). He emphasizes that happiness must be an activity and that this activity is contemplative. For justice, temperance, and bravery are all fine and rewarding virtues, but philosophic wisdom is the best of all of these. "And we think

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[5] While usually translated as such, *Eudaimonia* is not identical to happiness. It is used to describe the life that is the "most desirable and satisfying" (Ackrill 1973, 242).

happiness has pleasure mingled with it, but the activity of philosophic wisdom is admittedly the pleasantest of virtuous activities; at all events the pursuit of it is thought to offer pleasures marvelous for their purity and their enduringness"[6] (*Nicomachean Ethics* 1177a23-27). He concludes that "Happiness extends, then, just so far as contemplation does, and those to whom contemplation more fully belongs are more truly happy" (*Nicomachean Ethics* 1178b28-30).

In further elaborating on moral virtues or excellence of character, Aristotle presents us with the doctrine of the mean. Many classical Greek philosophers share this doctrine, and Aristotle uses it here as a guide to how one's actions ought to be conducted. Excess and defect should be shunned in favor of the mean:

> For the man who flies from and fears everything and does not stand his ground against anything becomes a coward, and the man who fears nothing at all but goes to meet every danger becomes rash; and similarly the man who indulges in every pleasure and abstains from none becomes self-indulgent, while the man who shuns every pleasure, as boors do, becomes in a way insensible; temperance and courage, then, are destroyed by excess and defect, and preserved by the mean (*Nicomachean Ethics* 1104a20-26).

Again he explains:

> For instance, both fear and confidence and appetite and anger and pity and in general pleasure and pain may be felt too much and too little, and in both cases not well; but to feel them at the right times, with reference to the right objects, towards the right people, with the right motive, and in the right way, is what is both intermediate and best, and this is characteristic of virtue (*Nicomachean Ethics* 1106b17-23).

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[6] The issue of enduringness is particularly relevant to a fast-paced consumer society where joys are often fleeting and spiraling production may be unwise. John Stuart Mill later echoes the sentiment above, and Aristotle had previously noted that "we can contemplate the truth longer than we can *do* anything" (*Nicomachean Ethics* 1177a22-23).

Aristotle is quick to argue that these rules are somewhat loose and must be applied with discretion to each different situation. Additionally, he argues there are clearly things for which the doctrine of the mean does not apply. Wrong is wrong. Murder, theft, envy, adultery cannot be helped by moderation.

All of this is not to argue the unassailability of Aristotle. Nevertheless, Aristotle and the countless educated people who would follow him over the centuries held ideas about the pursuit of happiness substantially different from the ones to which we have become habituated. These ideas are not completely unfamiliar. Indeed, many find that they have a certain idyllic charm and appeal. Though they are not the principles around which we have organized our economy, they do have merit. Additionally, these Aristotelian ideals were derived according to what he thought best for man, not what was best for the environment or for an economy facing globalization or environmental collapse. In examining our own society, and imagining how it could be different, how it could be better, it will be useful to remember that modern notions about happiness and its pursuit are not carved in stone. They are not time-honored, nor are they the logical, inescapable extension of our philosophical and spiritual heritage. They are, instead, part of a cultural norm that has been painstakingly constructed and diligently reinforced.

The social and environmental decay that vexes our society is a byproduct of our *modus operandi* for pursuing happiness. Our habits of thought about the obstacles to happiness, the surest routes to happiness, and about happiness itself shape what we will create, what we will protect, and what we will destroy. This book examines systematic biases in these habits of thought. It traces their historic and economic roots as well as their

social and environmental consequences. Finally, it offers suggestions for correcting these biases as a means of correcting the continuing social and environmental destruction.

There is an old joke about a man who has accidentally dropped his keys while walking across a vast and dark parking lot. Though he has no success, he insists on looking for them near the lot's only lamppost—because that's where the light is. This is sadly suggestive of our society. We look to spiraling commodity production as the key to our happiness not because it is particularly reasonable (material gluttony is, in fact, contrary to most major religions and philosophies) but simply because it is the option best revealed by our economy. If not the best way, it is, at least, the easiest. It is time, however, to move beyond our small circle lit by the mercury vapors of commerce. Stepping into the night, our eyes will quickly adjust, and, to stretch this analogy a bit more, we will be free to search where we suspect the keys have been all along.

An Outline

Personal, social, and environmental sacrifices made in our society are drastically disproportionate to the benefits offered by a commodity culture. The purpose of this book is to examine the historic and institutional roots of this imbalance in order to provide greater understanding of its nature and logic as well as keener insight into how best to ameliorate this incongruity. The difficulty in examining biases in our society is that they are so broadly engrained in our habits of thought and other institutions that they seem natural and exceedingly unremarkable. To address this impediment, this book takes an approach that is historic and evolutionary. By examining how and why these biases were constructed, and by contrasting them to alternative world views, it is hoped that this book will provide an opportunity to step back and re-view our society and the problems it faces. Specifically, this

book will survey the evolution of imbalances in both economic thought and market industrial society; it will examine the unique opportunities and consequences of such imbalances, and it will offer ways of correcting these imbalances.

The remainder of this book is divided into six more chapters. The predominant and unifying bias examined by this book is the institutionalization of scarcity. So, after this introduction, that is where we begin. We examine scarcity first in the context of the history of economic thought, then in the context of the rise of industrial market economies and, finally, as a dynamic consequence of the asymmetries found in our habits of thought and other economic institutions. Chapter 2 is an overview of concepts of happiness, progress, and most of all, scarcity. The next two chapters are an overview of the rise of commercial society. Chapter 3 examines the peculiar biases that were key to the construction of commercial industrial society. Chapter 4 looks at these same biases in the context of modern corporate capitalism. Chapter 5 is a digression on the unique and exploitative opportunities created by sharp discontinuities such as those arising from precipitous institutional imbalance. Chapter 6 ties together its preceding chapters by examining the consequences of the exploitative opportunities created by the specific imbalances of modern commercial society. The final chapter offers ways of ameliorating these consequences.

Chapter 2, to expand a bit, surveys the evolution of the scarcity concept in the history of economic thought by examining factors various economists have identified as constraining the economy's ability to progressively and continually promote social welfare. The purpose of this chapter is to demonstrate that the concept is an evolving one that shapes our conceptions about the potential for our economy and the purpose of economics. Additionally, the chapter argues the modern emphasis on an economy's physical constraints

is a bastardization of classical economic concerns that clouds contemporary reality and obscures the fact that social constraints are more pressing. This chapter identifies social causes of scarcity and shows that even concepts of physical scarcity evolved in a cultural context with reference to social goals. It demonstrates that the social construction of scarcity is dramatically accommodated by a delusional emphasis on physical constraints.

The third chapter introduces the concept of social articulation and emphasizes the importance and narrowness of the habits of thought found in commercial society. The chapter first explains what social articulation is and why it is important, then it examines the changes in the social articulation that were necessary for the creation of capitalist society. The chapter develops the thesis of the book by demonstrating that the key biases of commercial social articulation contain within them the seeds of scarcity. This is done by examining each of these elements of commercial social articulation. In doing so, the chapter demonstrates that each element is fundamental to both the accommodation of industrial capitalism and the perpetuation of scarcity.

Chapter 4 continues the analysis of the biases of commercial social articulation by examining the construction of a mass consumer culture, the rise in corporate power, and the general retreat of corporations from the vicissitudes of the market. The book's examination of institutional imbalance and the construction of scarcity is further developed by showing that modern capitalism exacerbates the biases found at its creation, and that the active creation of dissatisfaction was a strategy developed early in the 20th century to ensure commercial health at both the microeconomic and macroeconomic levels.

The next chapter, 5, introduces the concept of ecotones. The chapter first examines ecotones as an ecological concept, then explores their use in economic anthropology and

economic geography. Finally, ecotones are used to examine economic institutions. This chapter is important to the thesis of the book because it illustrates the importance of imbalances and their dynamic consequences. Sharp discontinuities, such as the imbalances in commercial social articulation, create opportunities for those wishing to exploit differences. Rather than just tipping the odds, these biases can have a compound and dynamic effect. Skewed outcomes become exacerbated as the unique opportunities provided by sharp discontinuities draw a superabundance of activity by those seeking differential gain.

Chapter 6 ties it all together. This chapter shows how the biases of commercial social articulation, compounded by ecotonal effects, create a vicious cycle that not only generates perpetual dissatisfaction but is also systematically deleterious to families, communities, and the environment. The cyclical nature of this dilemma arises because the inherent and inevitable dissatisfaction of our socioeconomic system prompts us to rely even more urgently on the commercial social articulation that is at the root of our discontent. The chapter proceeds by first exploring the nature of social and economic progress, how it is presently pursued, and how it can be ultimately achieved. It then turns to the nature and logic of the imbalances in our collective habits of thought. Specifically, it examines how much of the costs of commercial activity are borne by the non-commercial sphere. This leads to unwarranted environmental destruction and the withering away of goods such as beauty, family, community, and equity.

Chapter 7, the final chapter of this book, recaps the previous chapters, summarizes the book's conclusions, and traces out the implications for both economic policy and the study of economics itself. Specific policy recommendations are made that will benefit

individuals, families, and the environment by correcting institutional imbalances and breaking the cycle of scarcity.

This study endeavors to make four unique contributions. First, it agues that Godwin, Condorcet, and Mill shed more light on modern scarcity than do Malthus and Ricardo. While Ricardo and Malthus believed that human progress would be stifled by scarcity, Godwin, Condorcet, and Mill believed in a wondrous future where social progress would balance and complement material progress. Neither set of predictions proved true, yet it is the very failure of our three optimists' predictions that helps explain today's scarcity. Imbalance between material and social progress is the key to modern insufficiency.

Second, this work introduces the concept of *social articulation* to help explain the rise of modern imbalance. In addition to taking an approach that is historical and evolutionary, the methodology of this dissertation is, especially concerning social articulation, substantially dialectical. "The primary task of the dialectically minded social scientist," explains Robert Heilbroner, "... is to inform us to the presence and nature of our systematic misperceptions, so that we can discern essences where we would otherwise be deceived by appearances" (1980, 49). "*The target of dialectical methodology*," he later elaborates, "*is therefore illusion or delusion, not simple ignorance*" (49, his emphasis). *Contradictions*[7] are fundamental to this methodology. This work discovers a contradiction in our prevailing social articulation. Specifically, it discovers that elements necessary to the very way we coordinate social provisioning also ensure that this social provisioning will always be incomplete and unsatisfactory. This contradiction, it will be shown, perpetuates

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[7] Contradiction in a Marxian, dialectical sense. Heilbroner defines such contradictions as "those oppositions that are both necessary for, and yet destructive of, particular processes or entities" (1980, 39).

the construction of scarcity. Additionally, and more generally, the concept of social articulation helps illustrate that relative prices are just a small factor in decision making, even within a market economy.

Third, this dissertation introduces the ecological concept of ecotones to the study of economics. Ecotones are useful, for example, in examining economic anthropology and economic geography. Here, they are used to analyze the imbalances—stemming from our social articulation and unforeseen by Godwin, Condorcet, and Mill—that perpetuate scarcity.

Finally, and more generally, it is hoped this historical survey provides sufficient context to allow the reader to evaluate their world from a different perspective and to facilitate their identification of historic and institutional biases that shape our extraordinarily important conceptions of insufficiency and the pursuit of happiness.

Chapter 2: The Evolution of the Scarcity Concept

The world is too much with us; late and soon,
Getting and spending, we lay waste our powers:
Little we see in Nature that is ours;
We have given our hearts away, a sordid boon!
This Sea that bares her bosom to the moon;
The winds that will be howling at all hours,
And are up-gathered now like sleeping flowers;
For this, for everything, we are out of tune;
It moves us not.—Great God! I'd rather be
A Pagan suckled in a creed outworn;
So might I, standing on this pleasant lea,
Have glimpses that would make me less forlorn;
Have sight of Proteus rising from the sea;
Or hear old Triton blow his wreathèd horn.

—William Wordsworth

Physical Constraints

Presumptions of scarcity dominate economists' view of the nexus between the environment and the economy. "Life is short. Nature is niggardly" said Lionel Robbins (1949, 13), and most modern economics texts paraphrase his definition of economics as "the science which studies human behaviour as a relationship between ends and scarce means which have alternative uses" (1949, 16). Unlimited wants and scarce resources are among the first economic concepts leaned by thousands of principles students each year. However, the concept of scarcity is not without ambiguity. A distinction is often made between absolute scarcity and relative scarcity. In the literature of resource economics, these two

types of scarcity are known, respectively, as Malthusian and Ricardian scarcity (Barnett and Morse 1963, 51). D.C. Hall and J.V. Hall (1984), for example, actually distinguish between stock and flow variants of both Malthusian and Ricardian scarcity. For each of these four categories of scarcity, they identify a unique pricing condition (cited in Pearce and Turner 1990, 299-300). Indeed, the legacies of Thomas Malthus and David Ricardo have shaped environmental thought in a variety of ways, and their writings on scarcity merit examination.

Classical Variants of Scarcity

Before turning to our two economists, however, we will first examine the thought of two writers who better capture the optimism of the age's intellectual zeitgeist. Famously, the writings of William Godwin and Marie-Jean-Antoine-Nicolas Caritat, Marquis de Condorcet inspired Malthus' more somber work. In fact, the full title of Malthus' famous opus on population was *Essay on the Principle of Population, as It Affects the Future Improvement of Society, with Remarks on the Speculations of Mr. Godwin, M. Condorcet, and Other Writers.* A biographer of Condorcet's argues that "It would be difficult to find another philosphe who so completely exemplified the intellectual movement in France" (Schapiro 1963, 66). As for Godwin, "he blazed as a sun in the firmament of reputation; no one was more talked of, more looked up to, more sought after, and wherever liberty, truth, and justice was the theme, his name was not far off" (Hazel, quoted in Philp 1986, 6).[8]

Condorcet's "thought reflected all facets of the age of Enlightenment" (Spiegel 1971, 269). He believed that scientific progress as well as man's goodness and other

[8] Unlike Condorcet, Godwin's life exceeded his fame; "Godwin sank into obscurity after the turn of the century and lived most of the last thirty-six years of his life in neglect and poverty" (Philp 1986, 7).

faculties were subject to improvement without limit. He saw the improvements in material welfare generated by looms and machines and the general application of science. He recognized the power of reason to make humanity freer and happier. He concluded, therefore, that humanity was on an unstoppable march towards greater equality, justice, and happiness.

Condorcet believed the spread of public education would correct inequality. He called for the abolition of slavery. In championing gender equality, he called for "the total annihilation of the prejudices which have established between the sexes an inequality of rights, fatal even to the party which it favours" (1796, 280). In talking about the development of the moral faculties of man, he even hints at what we would call today environmental ethics. The sphere of man's duties may be extended to include "the influence of his actions upon the welfare of his fellow creatures" (1796, 274).

It was a wonderful vision of the future, one not restricted to material progress or limited by physical constraints. He dismisses the concern, on which Malthus would focus, that this very improvement might cause population to exceed the means of existence (1796, 272). Modern economists point out that Malthus underestimated the power of technology to allow the food supply to feed a booming population. Condorcet, however, fully counted on just such improvements in technology. Population thresholds were a long way off. By the time they were approached, he told his contemporaries, "the human species will necessarily have acquired a degree of knowledge of which our short-sighted understandings can scarcely form an idea" (1796, 273). It was a fanciful bit of optimism to be sure, but rarely has an economic forecast been more accurate. True to his vision, however, he did not place all his hopes upon technological virtuosity. He also believed in the indefinite

perfectibility of the human race. If society ever reached a point where population pressures threatened further advances, then a society where science and reason had grown while prejudice and superstition had withered away would recognize that it owed happiness, not just existence, to future generations. He does not offer specifics, but suggests that such an enlightened future society would have the capability to act on its convictions to ensure limits on the "possible mass of provision," and on population, would do "nothing alarming, either to the happiness of the human race or its indefinite perfectibility" (1796, 273).

The remarkable thing about Condorcet, this mathematician and philosopher turned political reformer, was that his optimistic vision for the future was written by a man facing his own death and witnessing his country dissolve into chaos. Today, some call TV pundits social visionaries, while a parade of dot-com IPOs are called social revolution. Yet, vision and revolution did not come so cheaply for Condorcet. He wrote his *Outlines* while hiding from the Reign of Terror and correctly believing his days were shortly numbered. "If anyone wishes a modern instance comparable to Socrates calmly discoursing philosophy, while awaiting death in his prison cell, he could find it in Condorcet calmly writing on the perfectibility of mankind under the shadow of the guillotine"[9] (Schapiro1963, 105). His most famous work would be published posthumously. In a moving passage, he concludes the book by reassuring himself, and the reader, that mankind is destined for better things:

> And how admirably calculated is this view of the human race, emancipated from its chains, released alike from the dominion of chance, as well as from that of the enemies of its progress, and advancing with a firm and indeviate step in the paths of truth, to console the philosopher lamenting the errors, the flagrant

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[9] Condorcet would die before reaching the guillotine. After nine months in hiding, he escaped from the house of his benefactress so his presence would no longer endanger her. Shortly after, he was arrested and thrown in prison. The next morning, he was found dead. There is some uncertainty as to whether he took his own life by ingesting poison hidden in a ring or from complications brought on by "exposure, hunger, and mental anguish" (Schapiro 1963, 104-107).

> acts of injustice, the crimes with which the earth is still polluted? It is the contemplation of this prospect that rewards him for all his efforts to assist the progress of reason and the establishment of liberty. He dares to regard these efforts as a part of the eternal chain of the destiny of mankind; and in this persuasion he finds the true delight of virtue, the pleasure of having performed a durable service, which no vicissitude will ever destroy in a fatal operation calculated to restore the reign of prejudice and slavery. This sentiment is the asylum into which he retires, and to which the memory of his persecutors cannot follow him: he unites himself in imagination with man restored to his rights, delivered from oppression, and proceeding with rapid strides in the path of happiness; he forgets his own misfortunes while his thoughts are thus employed; he lives no longer to adversity, calumny, and malice, but becomes the associate of those wiser and more fortunate beings whose enviable condition he so earnestly contributed to produce (1796, 292-293).

William Godwin was a political anarchist whose wife was the first suffragette, whose daughter wrote *Frankenstein*, and whose son-in-law was the poet Shelly. Godwin's ideas, especially those espoused in *Political Justice*, were inspirational not only to Shelly, but also to Coleridge, Wordsworth, and other such luminaries (Speigel 1971, 268). Like Condorcet, he believed in the unlimited potential for progress. Knowledge would continue to grow, and with it reason, justice, and equality. Equality, without it there could be no justice. Godwin, foreshadowing Veblen, Bellamy, and others, argued that under the reign of private property, men pursue their love of distinction via exhibitions of wealth. The conspicuous displays of wealth by the few come at the expense of the most basic needs of the many "Wealth is acquired by overreaching our neighbour," scolded Godwin, "and is spent in insulting him" (Godwin [1793] 1985, 728). In the reasonable future, when "good sense, and clear and correct perceptions...gain ascendancy in the world," the costly waste of such profligacies would be annihilated (Godwin [1793] 1985, 706). Reason would lead humanity to share property and work equally. Distinction would be sought, not in pecuniary terms, but in "the acquisition of talent, or the practice of virtue, the cultivation of some

species of ingenuity, or the display of some generous and expansive sentiment" (Godwin [1793] 1985, 706).

Godwin noted the tendency of population to be held down to the level of subsistence, and he even coined the phrase, later included in the title of Malthus' essay, "the principle of population" to describe this effect (Spiegel 1971, 268-269). However, he argued, as Spiegel explains, "where population pressure operates, it is the result of wicked institutions rather than of an inexorable refusal of nature to yield needed supplies" (Spiegel 1971, 269). Knowledge and reason would eventually correct these institutions, and all the while technological progress would ensure that productivity continued to grow. In the end, Godwin looked forward to a world where "there will be no war, no crime, ...no government....no disease, anguish, melancholy, or resentment" (quoted in Heilbroner 1953, 77).

Godwin and Condorcet believed in the inevitability of progress, and this progress was not delimited by commodities but defined in egalitarian, intellectual, and cultural terms. It is important to remember that Malthus' focus on physical constraints was a reaction to visions of prosperity that went well beyond coin & commodity. For classical economists, at the turn of the nineteenth century, were already greatly concerned with the constraints placed on the economy by the natural world. While men such as Godwin and Condorcet looked forward to the perfectibility of society, Thomas Malthus pointed to nature's trump: a finite world will not long endure exponential growth. In the parson's words, "the power of population is indefinitely greater than the power in the earth to produce subsistence for man" (1798, 13). The probiem was primarily a lack of space. Malthus recognized that nature was

exuberantly prolific; like a gas, it readily occupies the space allowed it. But land was finite, and arable land constituted only a small portion of that amount.

For Malthus, scarcity was manifest in what he called the law of necessity. Given the power of population to expand at a geometric, or exponential, rate while subsistence increases arithmetically, the two must be held commensurate "by the constant operation of the strong law of necessity" (1798, 26). Population would inevitably be brought under control. At issue was the ways by which balance would be ensured. Malthus created a taxonomy for these control mechanisms by dividing them into two major categories; both of these he likewise divided into two subcategories. He first distinguished between preventive and positive checks—between that which decreased birth rate and that which increased mortality rate. With regard to preventive checks, Malthus distinguished between preventing sex and preventing birth. He called the former moral restraint, and the latter he designated as vice. With positive checks, the distinction was between those found in nature, which he called misery, and those that were the deliberate acts of people, which he called vice.

Table 1 : Malthusian Checks

Preventive		Positive	
Moral Restraint	***Vice***	***Vice***	***Misery***
abstinence, delayed marriage	birth control, prostitution, abortion	infanticide, war	famine, pestilence

Parson Malthus was considered a decent man by those who knew him, and he certainly never advocated vice or misery. However, his pointing to the instrumental

function of such things as famine and infanticide did not help his popularity. "He was," in the words of one biographer, "the most abused man of his age. Bonaparte himself was not a greater enemy of his species" (James Bonar, quoted in Heilbroner 1986, 83). His *Essay on the Principle of Population*, lead Carlslyle to dub economics the Dismal Science—a name that the discipline, in various ways, has lived up to ever since. Malthus' musings, however, gave economics more than a moniker. By focusing on the economic implications of physical constraints, he and Ricardo, who is discussed below, helped change the mood of their age "from optimism to pessimism" (Heilbroner 1986, 103). Even today, the Malthusian specter lurks in the shadows of academia warning that death is the ultimate constraint on growth and development. Similarly, prognosticators of economic and ecological doom somberly suggest salvation in moral restraint. Here, then, is the main characteristic of Malthusian scarcity: it's a bummer. The good news is we can avoid a holocaust if we act very chaste. As the best option, moral restraint will be received with celebrations, and mild ones at that, only by the pious.

David Ricardo's version of economic scarcity had a different emphasis than Malthus'. Ricardo's version is found in his famous theory of rent. Not all land is of equal quality, Ricardo reasoned. Naturally the best land—be it for farming, mining, or whatever—is used first. Rent accrues to the owners of this prime land when land of poorer quality is brought into use. "When in the progress of society," explains Ricardo, "land of the second degree of fertility is taken into cultivation, rent immediately commences on that of the first quality, and the amount of that rent will depend on the differences in the quality of these two portions of land" (1817, 70). Food prices have to cover the costs of producing on the poorer land, so those same prices are sufficient to generate rent on the better land.

Specifically, if equal amounts of capital and labor were used on plots of equal size, then the "Ricardian Rent" would equal the value of the extra produce yielded by the superior land.

Marginal land would generate no rent. This was important to Ricardo who was trying to develop a quantity-of-labor theory of value. As Schumpeter explains, Ricardo wanted to solve "an equation between four variables: net output equals rent plus profits plus wages" (1954, 569). To solve a single equation with four unknowns, one has to do some pretty fast thinking. Since Ricardo was interested in distribution and not production, he could take net output as a given—a datum rather than a variable. Rent, in his theory, was, at the margin, zero. In fact, Schumpeter argues the "only purpose" of Ricardo's theory of rent "is to get rid of another variable" (1954, 569). As for wages, Ricardo, like Quesnay and Malthus, envisioned they would tend towards a subsistence level. Higher wages would facilitate population growth, lower wages would have the opposite effect. Ultimately, wages would be those consistent with a stable population. Finally, profits were left as a residual (1954, 569).

Taken together, Ricardo's abstract model is the outline for an interesting story. As the population grew, land of worse and worse quality would have to be brought into cultivation in order to feed the population. This would drive up food prices, which would necessarily increase the subsistence wage. Now, the manufacturing sector is not faced with the diminishing returns caused by less fertile soil. However, it is confronted by higher wages. Consequently profits must shrink, leaving less and less with which to finance capital accumulation and economic growth. A quantity-of-labor theory of value and diminishing returns lead to the conclusion that growth hurts capitalists, does not help workers, and benefits only landlords. If labor is the source of value, and poor land prompts the use of

more labor, then the value of agricultural product must increase. On the worst land, the increased value goes to pay for the additional capital and labor that is required; on the better land, it generates rent. As with Malthus, the Ricardian outlook is grim. In the end, the only people who can look forward to being better off are the landlords—a group that does not necessarily contribute anything to the economic process.

In the Malthusian model, the threat is that society, if unchecked, will exhaust its arable land and thereby its food supply. The finiteness of a resource has become known as Malthusian scarcity; the point at which such a resource becomes completely exhausted is known as the Malthusian limit (see for example Fisher 1990, 24, 97). With Ricardo, the diminishing *quality* of land is paramount; it makes increased production increasingly difficult. The diminishing quality or accessibility of resources is known as Ricardian scarcity; the resulting increasing marginal costs are the manifestation of Ricardian limits (see for example Fisher 1990, 24). One should not conclude the ideas Ricardo and Malthus are synonymous with these two modern concepts of scarcity. Most obviously, neither the Ricardian nor the Malthusian scenarios proved true. Physical scarcity was not nearly as onerous as they had imagined. Also, the two classical economists' ideas, it is worth mentioning, were neither completely different nor entirely their own. Certainly, Ricardo was under no delusions that land or mineral resources were infinite, and diminishing returns only makes Malthus' arguments more compelling. Indeed, concerns over absolute limits and diminishing returns are most intelligible when taken together; the latter, in fact, usually assumes the former.

Nevertheless, absolute and relative scarcities are significantly different from each other. As abstract concepts, neither requires the other. Though Ricardian scarcity generally

implies Malthusian, the reverse is not true. Speaking of what we are here calling Malthusian scarcity, Schumpeter notes "Scarcity, it should be observed, does not imply diminishing returns " (Schumpeter 1954, 676, n 85). Furthermore, despite Ricardo's famous concept, diminishing returns are not required for rent. All that is needed to explain rent is "Requisiteness and Scarcity" (Schumpeter 1954, 676). These distinctions help explain the differences between Ricardo's and Malthus' deceptively similar explanations of rent. In February of 1815, the modern theory of rent was created when Malthus and Ricardo, as well as Edward West and Robert Torrens, published pamphlets on the topic (Spiegel 1983, 294). Perhaps he was being charitable, but Ricardo focused on the similarities of their theories when later, in the preface to his *Principles*, he argued that Malthus and West had already espoused "the true doctrine of rent" (quoted in Schumpeter 1954, 677).[10] For his part, "Malthus did not need diminishing returns to account for the emergence of rent" (Schumpeter 1954, 678). Failing to realize this, he ultimately created a "mongrel, which was much more vulnerable to Ricardo's rapier than a correct statement need have been, of what he ineffectually strove to express" (Schumpeter 1954, 678). Another interesting difference between Malthus and Ricardo is that Malthus argued rent sprang from the bounty of nature while Ricardo argued it stemmed from the "niggardliness of nature" (quoted in Schumpeter 1954, 677). "Nothing," argues Schumpeter, "shows so clearly the primitivity of the analytic apparatus of the time as does the fact that two able men could actually discuss whether a return to a factor is due to its productivity *or* its scarcity." (1954, 536, n 5, his emphasis).

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[10] West's was, indeed, similar to Ricardo's. So much so, in fact, that Schumpeter repeatedly refers to the West-Ricardo system and the West-Ricardo theory of rent. See, for example, page 569 (1954).

Neoclassical Variants of Scarcity

The historic roots of the modern concepts of scarcity were vastly different from modern connotations. Malthus developed his arguments specifically against the possibility of widespread economic affluence such as we now enjoy. Ricardo also lamented the improbability of widespread material progress. Both economists were also fundamentally concerned about distribution. Ricardian rent and scarcity were developed as part of a system to show that while value was created by the quantity of labor involved, the wealth flowed to landlords. In fact, Schumpeter argues Ricardo does not offer "an explanation of the rent of natural agents, but only a substitute for one, which carries meaning only within that theoretical set-up" (Schumpeter 1954, 675). At this point, scarcity was not considered *The Economic Problem*, and the concerns it did raise have been largely irrelevant in the intervening history. The centrality of scarcity in modern economic theory borrows from classical roots in name but not in spirit.

Nevertheless, Malthusian and Ricardian scarcity do serve as the prototypes for modern theories of resource scarcity. Generally, resource economists make use of both concepts. Yet, a comparatively small group of theorist, referred to (often disparagingly) as neo-Malthusians, emphasize absolute limits. Donella and Dennis Meadows and Lester Brown are prominent examples. Modern steady-state theorists, like Herman Daly, also emphasize Malthusian, or absolute, scarcity. However, Ricardian scarcity, or relative scarcity as it is often called, has a certain affinity with neoclassical economics. Specifically, it fits nicely into their standard equilibrium model of rising marginal costs and decreasing marginal benefits—the very heart of supply and demand. It is as if economics wanted to

redeem itself in the eyes of Carlyle and the rest of the world. Ricardian scarcity, stripped of a quantity-of-labor theory of value, offered a kinder, gentler scarcity.

This softer side of relative scarcity arises because society never really has to run out of any resource. Rather, they just become increasingly inaccessible and costly. Remarkably, "this formulation implies something quite profound about exhaustible resources; namely, they are, in a sense, not exhaustible!" (Fisher 1990, 24). There is a bit of a paradox here. Neoclassical economists start with the assumptions that wants are unlimited and resources are frightfully scarce; yet they reach the conveniently comforting conclusion that society is unlikely to run out of anything. It is a triumph of rhetoric and abstraction presented as a triumph of real-world markets. The key to this paradox is rising prices. Higher prices decrease quantity demanded and make the search for substitutes more rewarding on both the supply and the demand sides. Before reaching Malthusian limits and running out of a resource, society will switch to a substitute. Progress is safe so long as the market is free to work its magic. The wonder of rising prices quiet Classical pessimism.

The scenario perfectly fits the essential characteristics of a story as explained by McCloskey in her book *The Rhetoric of Economics* (1998, 13-14). A minimal story needs three events where the first and third are the converse of each other and the second is the explanatory event that causes the third.

[*Curtain opens with whimpering protagonist at center stage.*] "Oh no! Our resources are so little and our wants are so big; surely we will run out of everything!"

[*Rising Prices enter stage right; cue trumpet volley.*] "Fear not. I shall vanquish the dastardly Relative Scarcity with my invisible hand."

"Glory be, we are saved! We shall never run out of anything ever again!" [*Cue strings. Cue Sunset. Close curtain.*]

Importantly, as we shall see throughout this essay, such stories are particularly appealing to that small portion of humanity that has lived in modern capitalist societies.

This neo-Ricardian paradox is key to the economists' mindset. It drives them to perpetually ask how society can efficiently do *more* while providing an escape from the bothersome issue of whether more is a good idea. Classical concerns over distribution and our collective destinies are replaced by the narrower, more immediate concerns of ensuring the right mix of inputs is used to produce the right mix of commodities. The ideas of Malthus and Ricardo addressed the fate of capitalism and whether or not contemporary policies were wise given the logic of the system, as they understood it. The neoclassical conception of relative scarcity has, within the paradigm, no implications for the ultimate destiny of capitalism. Consequently, there need not be any discussion of whether society is marching towards a reasonable, just, or desirable end, for there is no end in sight.

In fact, there is nothing particularly special about relative scarcity. The concept's greatest strength, and greatest weakness, is that it can be applied to anything. Land, oil, doughnuts, people, Picassos, time, tamales, they all exist in limited supply, and all have their uses. Everything, they say, is relative, but the problem with relative measures is that they are mercilessly vague. It is true that coal, food, cars, and TVs are relatively scarce, but a jet is slow relative to a rocket, and molten lead is relatively cool compared to molten copper.[11] If it did not make the need for economics seem less urgent, one may as well talk about

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[11] The melting point of lead is roughly a cool 327.5° Celsius while that of copper is about 1083.4° Celsius.

relative abundance.[12] Low prices on relatively abundant goods are no less important than high prices on relatively scarce goods.

For all its nebulosity, relative scarcity is perfectly suited for neoclassical economics. In fact, the two are perfect for each other. The *modus operandi* of neoclassical economics is to weigh costs and benefits and balance them at the margin. Relative scarcity suggests nothing more and nothing less than the existence of benefits and of (opportunity) costs. In short, relative scarcity is simply about two things: supply and demand. If the market works the way economists imagine it should, then relative prices will reconcile relative preferences and relative scarcity.

The neoclassical presentation of scarcity, however, involves a good deal of equivocation. Scarcity is not limited to the simple, vague, truism of relative scarcity. *Scarcity* has connotations that are much more evocative. Wording is not arbitrary or unimportant. "The metaphors[13] of economics," argues McCloskey, "often carry in particular the authority of science and often carry, too, its claims to ethical neutrality." "It's no use complaining," she continues, "that we didn't *mean* to introduce moral premises. We do" (1998, 47, her emphasis). There is a reason economics is not presented as the science of allocating relatively abundant resources. That reason harks back to a bastardized version of the Classical notions of scarcity. It is a belief that unhappiness, and any manner of social problems, stem from material insufficiency. Scarcity will not stop the progress of

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[12] Early economic inquiry, like that of Senior, Smith, Say, and Mill was closer to this emphasis. Wealth, not insufficiency, was the principle focus. Rising abundance and its sources, such as new technology and the division of labor, were important concerns.

[13] McCloskey does not restrict the label *metaphor* to such obvious examples as the invisible hand, game theory, the velocity of money, or elasticity. In fact, her explicit point is that other less obvious examples like aggregate labor, marginal costs, and the use of mathematics are also metaphorical (1998, 40-48).

capitalism, but dammit, it is responsible for the problems of today. Ricardo said it, Robbins said it, and it is the implicit mantra of neoclassical economics: "nature is niggardly."

Other Modern Variants of Scarcity

Thermodynamics: The Physics of Scarcity

The laws of thermodynamics are another way of approaching the issue of scarcity. Remarkably, the First and Second Law of Thermodynamics are not unlike Malthusian and Ricardian scarcity. The First Law of Thermodynamics states that the matter-energy of the universe is constant. The Second Law of Thermodynamics observes that a closed system will move from lower towards greater states of entropy. Entropy is a measure of disorder; in a closed thermodynamic system, it is a measure of the energy unavailable for work. Taken together, The Law of Conservation, and The Law of Entropy, as they are otherwise known, describe a universe where energy and matter are constant but increasingly inaccessible. One might say that The Law of Conservation is a statement of the Malthusian scarcity of the matter-energy in the universe. Similarly, the Law of Entropy can be viewed as proclamation of the inevitability of Ricardian scarcity.

Sadi Carnot, an early nineteenth-century engineer famous for his inquiry into the efficiency of heat engines, is arguably the father of the study of thermodynamics. "Thermodynamics thus began" Georgescu-Rogen argues, "as a physics of economic value." Referring to Carnot's work, he explains "it was the economic distinction between things having an economic value and waste which prompted the thermodynamic distinction, not conversely" (Georgescu-Rogen in Daly and Townsend 1993, 78). By mid-century Rudolf Clausius, building on Carnot, Joule, Kelvin and others, coined the term entropy and succinctly expressed what we now call the First and Second Laws of Thermodynamics,

stating "The energy of the universe is constant" and "The entropy of the universe tends towards a maximum" (quoted in Cardwell 1971, 273). Boulding (1949-50, 82) wrote about entropy and the squandering of low-entropy resources decades before most economists gave the concepts much heed. With his famous 1966 article "The Economics of the Coming Spaceship Earth" (see Daly and Townsend, 1993) and Georgescu-Roegen's 1971 book on entropy and economics, economists finally became interested in the subject.

Like Ricardian and Malthusian scarcity, the first two laws of thermodynamics become increasingly constraining in light of each other. The inability to create matter-energy would be of no concern if not for the creeping rise of entropy. Entropy, for its part, would not be worrisome if low entropy resources existed in unlimited supply or could be created. This is not the case. In light of both laws, the availability of low-entropy resources becomes an essential issue. These resources are, for the most part, either solar or terrestrial. The sun provides a flow of low-entropy energy.[14] As a source, it is limited by the rate of this flow. Earth provides a finite, low-entropy stock of both matter and energy. Such terrestrial resources are usually classified as renewable or nonrenewable. Nonrenewable resources are limited by their quantity. Renewable resources are limited by their sustainable rate of use. Thus, all low-entropy resources are limited in some way.

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[14] Though sometimes considered as such for simplicity, the solar system is far from being a closed system. Starlight and a great deal of other information reaches earth from beyond the solar system and even beyond the galaxy. This energy has proven invaluable in, among other things, scientific development from early math to modern astrophysics and cosmology.

Both laws of thermodynamics are also important in understanding pollution. If it were not for entropy, then the first law of thermodynamics would suggest that all matter and energy could be continuously recycled. The fact that waste does not disappear would thereby be a real boon to the economy and scarcity would not be a threat. The Second Law of Thermodynamics, however, ensures that this throughput now exists in a less useful form. Each transformation of throughput necessarily reduces its usability. All this might lead one to wonder what is scarce and what is consumed by the economic process. What is scarce? The economy cannot consume, or use up, matter or energy—they are inexhaustible. The economy can, however, diminish their accessibility. Each transformation of throughput necessarily leads to greater entropy of the overall system. The economy, then, consumes low entropy. There is an opportunity cost to this irreversible increase in entropy; the associated throughput could have been used for something else. For this reason, increased entropy can be viewed as an ultimate cost of economic activity (Daly 1991, 25). Much of the discussion of economics and thermodynamics revolves around the implications of these entropic costs.

There is an asymmetry in the opportunity costs of using low-entropy energy sources that reflects the asymmetry between the terrestrial stock and solar flow of these resources. Though diffuse, the flow of solar energy reaching Earth in a single year dwarfs that which could be obtained from the planet's entire endowment of fossil fuels. On Earth, the Sun produces wind and rain and photosynthesis. Windmills, hydroelectric generators, and biofuels can be used, like the photovoltaic cell, to put solar energy to work. A sunny day or a gust of wind, however, is fleeting. If we use them to produce work, we have not done so

at the expense of future generations. It is different with fossil fuels. With these, there is an inter-temporal opportunity cost.

This has lead some to argue that use of scarce terrestrial energy resources should be minimized in favor of the more abundant solar source. Doing otherwise is unsustainable and, in a sense, living beyond our budget constraint (Daly 1991, 23). Traditional sources of energy, such as food, wood and wind, could be considered more economical than our modern reliance on fossil fuels (Daly 1991, 22). Similarly, one might argue increased reliance on mechanization and artificial fertilizers is "antieconomical" because it is a substitution into relatively scarce resources (Georgescu-Rogen in Daly and Townsend 1993, 84).

From the "Gloomy Presentiments" (Heilbroner 1953, 75) of Malthus and Ricardo, we move to the weighty laws of physics and worry about a phenomena that is also a concern to meteorologists, astronomers, and biologist. Low-entropy, we need it bad and there is less of it with every millisecond. Scarcity has seemingly grown more rigorous. We're out of Tom and Dave's frying pan only to fall in Sadi and Rudy's fire.

Reassuringly, there are many economists, both radical and neoclassical, who do not believe that the laws of thermodynamics should cause alarm over current patterns of resource use. De Gregori (1986), for example, points out that resources are continuously created and not just objects which exist at ever-increasing states of entropy. Resources must be defined in terms of the current state of technology. Technology transforms objects and phenomena into resources. As each level of technology brings a higher one within reach, this negentropic process of resource creation builds upon itself (De Gregori 1986, 467). Particular resources have always been scarce and thus limiting. However, De Gregori

argues, both biological and cultural development have always been about overcoming limits and creating new resources (1986, 466-467). Towards a similar end, neoclassical economists point to factor substitution. As a particular resource grows relatively more scarce, rising prices will favor its replacement by a substitute.

The laws of thermodynamics, one might argue, impose two levels of constraint. In the short run, specific resources—as defined by current technology—are depletable. In the long run, since all matter-energy is finite and subject to increasing entropy, all low-entropy resources and potential resources are depletable, and the substitution gambit ceases to be effective. In the former case, the issue is whether technological advance can create new resources more quickly than the old ones are depleted. In the latter case, the issue is whether it will take decades, millennia, or eons for this ultimate limit to become pressing.

Physical, Ecological and Ethical Constraints: The Steady State

Concern over the planet's ultimate bio-physical constraints has lead some economists to passionately call for a steady-state economy. A steady-state economy is one where the stocks of people and their artifacts are constant and the rate of throughput is minimized. While many concerns of steady-state proponents are neo-Malthusian in nature, their arguments go far beyond the population dynamic. In addition to population concerns, steady-state theorists point to the concepts of ecological sustainability and the laws of thermodynamics. They also emphasize the difference between quantitative growth and qualitative development. While a steady-state economy would not grow, a steady-state society would hopefully continue to develop and improve.

Policies championed by steady-state advocates often revolve around moral issues. In fact, it has been argued that the only arguments against continued growth and material

accumulation are ethical and religious ones (Daly and Townsend 1993, 155). This explicitly moral orientation of steady-state discussions often attracts controversy. For example, zero growth would demand a more even distribution of wealth within and among nations as well as institutions for controlling population (Daly 1991, 53). Yet, policy recommendations advocating birth control or redistribution raise counter arguments by people concerned with such issues as religion, gender, and nationalism.

Classical economists viewed the stationary state with trepidation. Falling profits, as we saw with Ricardo, would put an end to capital accumulation, and the stationary state with its stagnate wages and negligible profits would ensue. John Stuart Mill was unique in seeing a bright side to these dismal prognostications. In his Principles *of Political Economy* (1857), he suggests it would be "a very considerable improvement on our present condition." He eschewed the notion that "the normal state of human beings is that of struggling to get on" and argued "the trampling, crushing, elbowing, and treading on each other's heels" were the "disagreeable symptoms of one of the phases of industrial progress." This very much foreshadows Keynes who looked forward to a time when material comfort had been achieved and society's new, permanent challenge would be learning how to "live wisely, and agreeably, and well" (1932, 367). Along these lines, some modern economists consider the steady state to be a necessary and desirable response to social and environmental concerns, rather than a consequence of falling profits. John Kenneth Galbraith's 1958 classic *The Affluent Society* challenged the preoccupation with production, and by the late 1960s and early 1970s writers such as Boulding, Georgescu-Roegen, Meadows and Meadows, and Daly had drawn attention to the economy's biophysical constraints. With the

1977 publication of Daly's *Steady-State Economics*, the arguments for a steady state were becoming widely known, though not widely accepted, by economists.

Advocates of a steady-state economy argue that continued growth is impossible. Booming populations, exponential industrial growth, and the constraints of ecology and the laws of thermodynamics gave rise to arguments that current trends could lead to disaster and ruin by century's end if not checked. Consistent with the expectations of Godwin, dramatic improvements in agricultural and medical sciences have largely quieted Malthusian fears. Yet, scientists still point to the same dilemma—population can be controlled humanely by reducing the birth rate or disastrously by hunger, disease and war. Population growth is especially alarming now that of billions of people being added to the planet in a single generation. At the same time, dramatic increases in the standard of living accelerate our rush towards biophysical limits.

Additionally, social, ethical, and ecological concerns suggest continued growth is undesirable. As humanity's impact on the environment continues to grow exponentially, many have voiced concerns about non-human nature. Daly (1991, 188), for example, argues that society's concern for the environment should not be limited to nature's sustaining role of providing sources and sinks for the economy. Society must also give attention to the intrinsic value of other species. Unprecedented affluence accompanied by social malaise has led to further questions about the desirability of unchallenged growth. Growth, as discussed below, cannot satiate relative wants. Moving ahead of the crowd, whether for invidious or practical reasons, is a zero-sum game. As relative wants grow in significance compared to more basic needs, growth may no longer effectively temper demands for more even distribution.

The distinction between growth and development is important in steady state theory. The following identity (Daly, 1991) is useful in determining the desiderata of a steady state as well as highlighting the difference between growth and development:

$$\frac{\text{service}}{\text{throughput}} \equiv \frac{\text{service}}{\text{stock}} \times \frac{\text{stock}}{\text{throughput}}.$$

Starting, somewhat roughly, with the first ratio, *service* is the benefit of the economic system and *throughput* is the cost. *Service* is the satisfaction or Fisherian "psychic income" (Daly 1991, 35) yielded by stock. *Throughput*, is "the entropic physical flow of matter-energy from nature's sources, through the human economy and back to nature's sinks" (Daly 1993, 326). As discussed earlier, the Second Law of Thermodynamics shows that the flow of throughput from resource to good to waste necessarily results in a higher level of entropy. In keeping with both laws of thermodynamics, such consumption of low entropy, it was argued, is a cost. Or, moving closer to conventional economics, we can say that there is an opportunity cost to the increase in entropy because it could have yielded alternative services to the economy or have been utilized by the ecosystem (Daly 1993, 327). Thus, throughput is inextricably linked to increased entropy and costs. The ratio of service to throughput is final service efficiency (Daly 1991, 37) or, better still, outcome efficiency.

Stock refers to physical things capable of satisfying human wants. It includes the people as well as producer and consumer goods. Daly (1991) in keeping with Boulding (1949-1950) emphasizes that service is yielded by stocks rather than flows. It is the stereo itself, not its wearing out that brings enjoyment. The ratio of service to stock is the service efficiency. Similarly, the ratio of stock to throughput indicates the efficiency of throughput in maintaining stock. Improved durability will increase this "maintenance efficiency" ratio.

The identity shows a clear distinction between throughput, service, and stock. Steady state policies require treating each differently—minimizing throughput, maximizing service (subject to a given stock) and saticsficing with regard to stock. Steady-state economics, therefore, challenges not only the habitual policy of economic growth, but calls into question measures used to track economic progress. Rather than making such distinctions, national income accounts, add together "three very unlike categories: throughput, additions to capital stock, and services rendered by the capital stock" (Daly 1991, 30).

Growth, the identity also shows, has an ambiguous effect on development. The left-hand side of the identity is the amount service per unit of throughput. Development can be thought of as an increase in this ratio (Daly 1991, 37). It is possible to develop without growth. This can be accomplished by reducing the amount of throughput required to maintain a given level of stock or by changing the use and composition of this stock to produce more service per unit of stock. That is, development occurs by improving service efficiency and maintenance efficiency. Growth, or an increase in stock, affects the two ratios on the right-hand side of the equation. Great or small, stock itself divides out without any necessary effect on development. While greater stock may accommodate greater service, it also, *ceteris paribus*, requires greater throughput. It is possible, Daly (1991) acknowledges, that there may be a limit even to development. Maintenance efficiency is constrained by the Second Law of Thermodynamics. Specifically, the tendency towards higher entropy prevents stocks from being infinitely durable. It is also conceivable, he argues, that the limits of time and human physiology may ultimately constrain service efficiency.

A steady state may not be possible or desirable. Capitalism's very logic, we shall see, is tied to the insatiable transformation of throughput. While, in some economic regime, throughput might be minimized, entropy would require some throughput to maintain stocks. Should we replace only that which wears out and chain human creativity to the dreary pace of entropy? Certainly, one might argue, creativity can turn inward. Godwin and Mill would remind us that the perfectibility of the human mind and character offers abundant hope and immeasurable room for development. While improved balance in that direction is certainly warranted, we would do well to remember that we have hands as well as brains. We are tool makers and tool users. Material transformation is an important part of our individual and cultural identities. As children and adults, we like our sandcastles and are the better for it. The possibility of a steady state may rest on whether we emphasize social or physical parameters when defining *minimal throughput*. The former may be more necessary but much more lax than the latter.

One might reasonably question the task of determining how many commodities the economy can squeeze out of the biosphere without causing a catastrophic collapse. Thermodynamic constraints and the upper limit to growth, as opposed to development, are arguably less important than understanding those forces which at once spur growth and make it so unsatisfactory. Inquiry into such issues offers common ground for both the technophile and the Ludite. Conspicuous consumption, inequality, fashion, planned obsolescence, and the angst of affluence are all problems whose significance transcends the debate over the capacity of human genius and creativity to cheat the laws of thermodynamics.

There is a bit of irony in the fact that many of the staunchest critics of the steady state, and of those who worry about thermodynamic and ecological constraints, are the neoclassical economists for whom Ricardian and Malthusian scarcity are the bastard bricks of their theories. Ricardo, no less than Malthus, was interested in using economic reasoning to describe the logic of capitalism—a logic that would inevitably lead to a stationary state. So arousing are these concepts of scarcity that the infatuation remains long after we have lost sight of their end.

Social Limits to Growth

At this point, one might start to wonder why there is so much clamor about scarcity. The fears of Ricardo and Malthus now seem somewhat silly; neoclassical relative scarcity applies even to goods, like soft drinks and Disney products, that exist in superabundance. The multibillion-year-old march of entropy has yet to stop human progress, and the pace of technological change is so explosive that it is a fair bet new resources can be created as fast as the old ones are depleted. This book takes the approach that the most meaningful concept of scarcity is as a social construct. Scarcity exists, to choose a rough starting point, not because Malthus' prognostications were right but because Godwin's were wrong. The issue is dissatisfaction and its expression as a desire for more commodities. This is does not mean that physical constraints are unimportant, or that it is impossible for society to drain an aquifer or ruin a fishery. The market is not magical; physical and biological limits do apply. However, the lack of magic is an exceedingly modest supposition. Meaningful inquiry demands more. The most fundamental question from an economic standpoint is, Why would we drain an aquifer or ruin a fishery? Here, the point of inquiry is utility, as it

ostensibly is in most economic analysis. We need to examine how our desires are shaped and articulated.

Economists have not focused on social scarcity as much as they have physical scarcity. Nevertheless, the concept is not new, and many economists have addressed it in a variety of ways. Mill, we have seen, hinted at it by looking forward to steady state wherein industrial progress had rescued society from physical privation. He did so more explicitly, as outlined below, when he worried about the possibility of happiness and progress in the then impending affluent society. Thorstein Veblen also wrote extensively on the topic. The source of our dissatisfaction is not material insufficiency, but arises because:

> the standard of expenditure which commonly guides our efforts is not the average, ordinary expenditure already achieved; it is an ideal of consumption that lies just beyond our reach, or to a reach that requires some strain. The motive is emulation—the stimulus of an invidious comparison which prompts us to outdo those with whom we are in the habit of classing ourselves. ...all canons of reputability and decency, and all standards of consumption, are traced back by insensible gradations to the usages and habits of thought of the highest social and pecuniary class—the wealthy leisure class.

If society has organized itself around commodity production, one might object, then certainly it has done so because this is the best and surest way to happiness. If, on the other hand, scarcity is an artifact, if the infinite desire for commodities is not an inescapable part of human nature, then the reasons for the continued primacy of production need to be explained. In fact, a number of economists, including John Kenneth Galbraith, Staffan Linder, Juliet Schor, and Fred Hirsch, have offered plausible explanations. Galbraith directly questioned the undiminished urgency of wants in affluent societies. "Presumably," counters Galbraith, "the more important things come first" ([1958] 1985, 118). The treadmill of production and consumption is ultimately unsatisfying because, in affluent societies, wants increasingly "depend on the process by which they are satisfied" (Galbraith

[1958] 1985, 126). The billions of dollars spent each year on advertising to create wants is irreconcilable with assumptions of the insatiability of wants.

Staffan Linder, however, does not challenge the insatiability assumption. Nevertheless, he doubts growth's capacity for continued welfare improvements because of an increasing scarcity of time. That is, increases in the level of consumer goods will prove less and less satisfactory simply because there is a finite amount of time in which to enjoy all goods. According to Linder:

> Increases in the volume of consumption might thus give only dwindling increments to well-being for two different reasons: wants can gradually become less pressing or the possibilities of using consumption increases can become smaller, owing to an increased scarcity of time. The latter case, unlike the former, does not presuppose any decline in the intensity of our desire to acquire further material improvements (1970, 126).

Linder's reluctance to accept the possible satiation of wants is important because it is representative of the reservations many economists have concerning social and environmental challenges to the production paradigm. Linder and other economists eagerly accept neither the notion "that there will be an enforced consumption maximum on the supply side, nor... the idea that there will be a voluntary consumption maximum on the demand side" (Linder 1970, 125). For his part, Linder gets around this by arguing even in a society of insatiable consumers and an illimitable capacity for innovation and production, time will constrain our ability to enjoy an ever-increasing level of goods. In this way, Linder discovers the possibility of a consumption maximum without having to "relate the volume of consumption to anything so diffuse as 'wants,' but to something as measurable as time" (1970, 126). "It is possible," Linder concludes, "that we shall desire economic growth, even if the utility of consumption increases were zero" (1971, 129).

Hirsch (1976) and Schor (1992) both emphasize the importance of positional goods and consumer wants that are relative to one's neighbors and cohorts. These types of wants are increasingly prominent in societies that have met basic needs. Yet, it is logically impossible for society as a whole to make progress on this front. This is the familiar problem of the fallacy of composition. It makes sense for the individual to try to escape traffic, noise, and crowds by moving to the neighboring countryside. However, if many try to do the same, urban problems will replace rural amenities. If everybody buys a SUV so that they may see over other vehicles and not be the smallest one in the event of an accident, then their actions have been for naught. No matter how affluent an economy gets or how fast it grows, the number of people who can afford servants, the best seats, the nicest cars, or the biggest houses will always be strictly limited.

Together, these economists have shown that households will continue on the path of high production and consumption even when this path fails to lead to greater welfare. At the heart of each argument is the notion that prevailing information and incentives leads individuals to make decisions that are irrational from a collective point of view. This systemic irrationality comes at a high cost. On top of the environmental degradation of high-throughput economies, there is the opportunity cost of time not spent in more promising activities such as cultivating familial and community relationships. As individual decisions lead in the wrong direction, collective decisions are called for—ones that ameliorate the strong incentives of the market to head in the wrong direction.

In *The Human Prospect,* Heilbroner examines what he calls the "civilizational malaise." "The civilizational malaise, in a word, reflects the inability of a civilization directed to material improvement—higher incomes, better diets, miracles of medicine,

triumphs of applied physics and chemistry—to satisfy the human spirit." He explains, "the values of an industrial civilization, which for two centuries have given us a sense of *élan* and purpose, now seem to be loosing their sense of self-evident justification" (Heilbroner 1974, 19). Herein lies the significance of Heilbroner's thesis. The problems confronted in environmental economics are greater than their technical and ecological components (Heilbroner 1974, 55). Inappropriate or inadequate social institutions, though often overlooked, are the primary culprits in the destruction of the environment. There is, in Heilbroner's words, "an extended and growing crisis induced by the advent of a command over natural processes and forces that far exceeds the reach of our present mechanisms of social control" (Heilbroner 1974, 57). Correcting this imbalance, by developing social control institutions not rooted in the quest for material improvement, is a principle concern of this study.

Foreshadowing Modernity: The Life of John Stuart Mill

The life of John Stuart Mill offers important insights into the modern economic crisis to which Heilbroner refers. As a young adult, Mill suffered from a crisis in his mental health. The remarkable thing about Mill's bought of depression, was that it foreshadowed, as he knew it would, the malaise of affluent society. Mill's depression grew out of the realization that formal institutions and the material provisioning of society, even if perfected, were insufficient to guarantee happiness. Mill left an account of his despondency in his autobiography; because it is so interesting and relevant in many ways to this study, it is worth examining at length:

> From the winter of 1821, when I first read Bentham, and especially from the commencement of the Westminster Review, I had what might truly be called an object in life; to be a reformer of the world. My conception of my

> own happiness was entirely identified with this object. The personal sympathies I wished for were those of fellow labourers in this enterprise. I endeavored to pick up as many flowers as I could by the way; but as a serious and permanent personal satisfaction to rest upon, my whole reliance was placed on this; and I was accustomed to felicitate myself on the certainty of a happy life which I enjoyed, through placing my happiness in something durable and distant, in which some progress might always be making, while it could never be exhausted by complete attainment. This did very well for several years, during which the general improvement going on in the world and the idea of myself engaged with others in struggling to promote it, seemed enough to fill up an interesting and animated existence. But the time came when I awakened from this dream. It was the autumn of 1826. I was in a dull state of nerves, such as everybody is occasionally liable to; one of those moods when what is pleasure at other times becomes insipid or indifferent ... In this frame of mind, it occurred to me to put the question directly to myself: 'Suppose that all your objects in life were realized; that all the changes in institutions and opinions which you are looking forward to, could be completely effected at this very instant: would this be a great joy and happiness to you?' And an irrepressible self-consciousness distinctly answered, 'No!' At this my heart sank within me: the whole foundation on which my life had been constructed fell down. All my happiness was to have been found in the continual pursuit of this end. The end had ceased to charm, and how could there ever again be interest in the means? I seemed to have nothing left to live for (Mill 1965, 83).

He was twenty years old and contemplating suicide. One imagines such thoughts give Mill something in common with millions of modern American youth.[15] Yet, this was not simply youthful angst. For even then, Mill's "mental age already had the timelessness of the Sphinx" (Packe 1954, 74). He had lost interest in is own welfare and that of others, and the realization of this sad fact made him all the more depressed. He imagined that he could not bear his existence for more than another year. Then, at the depth of his despair, he discovered he still had the capacity to feel. He was moved to tears by a passage in a book and these tears relieved him of the "oppression of the thought that all feeling was dead

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[15] Horribly, in the US suicide is the third leading cause of death among young people aged 15-24. For this group, the morbidity rate is 12 per 100,000 (20 per 100,00 for males only) (U.S. Census 1999, 102, 108). These rates are believed by many to be substantial underestimates as many suicides are counted as accidents. Unlike many public health problems, suicide rates are much, much higher among white males than for other demographics.

within me" (Mill 1965, 87). As Mill's despair started to wane, he drew lessons from his experience. The first was that happiness must be pursued indirectly. "Ask yourself whether you are happy," said Mill, "and you cease to be so" (Mill 1965, 88). The key was the realization that "The enjoyments of life...are sufficient to make it a pleasant thing, when they are taken en passant" (Mill 1965, 88). Happiness, he still believed, was life's ultimate end, but make something else your life's pursuit without dwelling on happiness directly and "you will inhale happiness with the air you breathe, without dwelling on it or thinking about it, without either forestalling it in imagination, or putting it to flight by fatal questioning" (Mill 1965, 88). He also realized what was missing from his previous conception of how to improve the common good:

> The other important change which my opinions at this time underwent, was that I, for the first time, gave its proper place, among the prime necessities of human well-being, to the internal culture of the individual. I ceased to attach almost exclusive importance to the ordering of outward circumstances and the training of the human being for speculation and for action.
>
> I had now learnt by experience that the passive susceptibilities needed to be cultivated as well as the active capacities, and required to be nourished and enriched as well as guided...I never turned recreant to intellectual culture, or ceased to consider the power and practice of analysis as an essential condition both of individual and social improvement. But I thought that it had consequences which required to be corrected, by joining other types of cultivation with it. The maintenance of a due balance among the faculties, now seemed to me of primary importance (Mill 1965, 88-89).

From the time he was three and his father first started teaching him Greek, Mill had been trained for analysis and action. His education had been second to none, but now he sought to correct its major shortcoming—he "went after emotion like an addict after drugs" (Packe 1954, 81). Initially, his quest to cultivate passive susceptibilities left him listless. Music seemed like a fertile field for such cultivation, and he did enjoy works by the likes of Mozart and Weber. However, he could not help but think that there must be a finite number

of beautiful musical permutations. Eventually, he worried, existing music would grow tiresome and there would be no room for another Mozart. An enduring source of happiness for himself and humanity therefore remained elusive, and Mill, accordingly, remained despondent:

> I felt that the flaw in my life, must be a flaw in life itself; that the question was whether, if the reformers of society and government could succeed in their objects, and every person in the community were free and in a state of physical comfort, the pleasures of life, being no longer kept up by struggle and privation, would cease to be pleasures. And I felt that unless I could see my way to some better hope than this for human happiness in general, my dejection must continue... (Mill 1965, 90)

For all his brilliance, Mill did not predict the resilience of our cultural propensity towards struggle or the social ambiguity of privation. In spite of amazing strides in technology and material accumulation, the American workweek is as long as it was sixty years ago. In fact, with increased workforce participation by women, households are increasingly busy. It is difficult to imagine, however, that Mill would take comfort in the thought of pleasures of life remaining pleasurable simply because struggle is eternal. For the moment, this digression will have to suffice so that we may learn what Mill concluded did offer hope for himself and the future of humanity.

Finally, in the autumn of 1828, Mill read Wordsworth for the first time. He had read Byron but Byron was himself too melancholy to be of help to Mill. Wordsworth was completely different; it was only pretty good poetry but it was the perfect palliative for Mill's ills:

> In the first place, these poems addressed themselves powerfully to one of the strongest of my pleasurable susceptibilities, the love of rural objects and natural scenery; to which I had been indebted not only for much pleasure in my life, but quite recently for relief from one of my longest relapses into depression. In this power of rural beauty over me, there was a foundation laid for taking

> pleasure in Wordsworth's poetry; the more so as his scenery lies mostly among mountains, which, owing to my early Pyrenean excursion, were my ideal of natural beauty. But Wordsworth would never had any great effect on me, if he had merely placed before me beautiful pictures of natural scenery. Scott does this still better than Wordsworth, and a very second-rate landscape does it more effectually than any poet. What made Wordsworth's poems a medicine for my state of mind, was that they expressed not mere outward beauty, but states of feeling, and of thought coloured by feeling, under the excitement of beauty. They seemed to be the very culture of feelings which I was in quest of. In them I seemed to draw from a sense of inward joy, of sympathetic and imaginative pleasure, which could be shared in by all human beings; which had no connexion with struggle or imperfection, but would be made richer by every improvement in the physical or social condition of mankind. From them I seemed to learn what would be the perennial source of happiness when all the greater evils of life shall have been removed (Mill 1965, 91).

Drawing on personal experience, Mill discovered fundamentals of the human economy that are, even today, poorly understood by many economists. The first of these fundamentals was that happiness would be a real problem in an affluent society. It would not simply be the inevitable result of economic progress. When people are free, healthy and comfortable, when all material gain is of low marginal urgency, whence happiness? The absence of misery is one thing, but out and out joy is quite another. It can be found in the sense of progress and achievement from hard work. However, when one's work no longer makes a direct or immediate contribution to one's family or community, might some start to find it futile?

Mill was raised as a man of action and his utilitarian credentials were from Bentham himself, but he now realized that the *pursuit* of happiness was ill advised. One cannot take deliberate steps in its direction and be certain of drawing closer. Nor, we might add, can one use commodities like rungs on a ladder to climb to bliss. Happiness is a byproduct, a byproduct of other pursuits. This is a stunning conclusion. It makes one's mind reel. It changes the neoclassical economic assumption—that everything we do, we do to make us

happy—from an optimistic tautology to a blueprint for futility. Fortunately, there is a way to happiness. It is the wondrous phenomenon that a quest for some other objective can also yield pleasure. But to be open to this possibility, Mill needed due balance in is life—balance achieved by the cultivation of "passive susceptibilities." Even that, though, only addresses part of the problem. For absent the historic struggle for subsistence, what is there to prevent all pursuits from becoming tedious, empty, and uninspiring?

So where does that leave us? If affluence, with all of its benefits, also brought malaise and diminished the joys of achievement, if individual determination and the best efforts of scientists and social workers could not guarantee steady progress towards greater happiness, where was Mill to find a source of joy to elevate his spirits and give him hope for posterity? The answer was that this "perennial source of happiness" was something that need not, could not, be manufactured by science or industry. The "states of feeling, and of thought coloured by feeling, under the excitement of beauty" conveyed by Wordsworth's poetry had taught Mill that "there was real, permanent happiness in tranquil contemplation" (Mill 1965, 91).

The problem, of course, is that things like contemplation and beauty are not as straightforward as production of commodities. The market can coordinate work done by man, beast and machine into the production of commodities, and the progress made in this regard can be quantified, scrutinized, and magnified. The same cannot be said about Mill's prescription. It is possible to make a coordinated effort to promote contemplation and beauty, but it would be a difficult task, approachable only indirectly, and progress would be difficult to measure. More cars, more computers, more microwavable food, these desires are readily conveyed and acted upon. Objects, products, and services lend themselves to

action. Subjective states of being and feeling, however, are inherently idiosyncratic. Their articulation and coordination is difficult and imprecise. It would be easier to concentrate on external desires. In fact, that is the point. These inward joys are a promising alternative to material malaise, but the predilection towards production prevents due balance.

Mill is similar to Aristotle both in his emphasis on contemplative pleasures and his emphasis on balance. It is interesting that similar ideas generated by two of the greatest minds in Western history could be so thoroughly ignored in the structuring of Western society. Heilbroner, somewhat like Mill, also suggests inward joys might provide hope for society: "It is therefore possible that a post industrial society would also turn in the direction of many pre-industrial societies—toward the exploration of inner states of experience rather than the outer world of fact and material accomplishment" (1991, 166). Neither Mill nor Heilbroner are advocates of atavism. Instead, they are interested in the tremendous promise of a society that can somehow balance the best of science and material advancement with the pleasures of a mind stimulated by the environment, beauty, and rich interpersonal relationships.

This brings us back to the theme of this book. The issue is one of balance. There needs to be a balance between internal and external pleasures, between the active and the passive, between private and public, between that which must be manufactured and that which needs to be preserved. Such a balance is increasingly urgent for societies where commercial production claims an increasing toll on the global environment while yielding only ambiguous benefits. Private affluence and public squalor, material abundance and spiritual poverty, commercial extravagance and a paucity of beauty, love, security, and

wonder do not characterize a healthy society. Nor does such a society warrant an unrestricted claim on human and material resources.

The market economy is very good at coordinating the production of commodities. However, what the market does well is not coextensive with the desiderata of social welfare. Market propensities, in fact, are often at odds with some of the characteristics of a healthy society. It should surprise no one that capitalism is imperfect and incomplete, and this would not be particularly problematic if there was balance in the way society coordinates social provisioning. Regrettably, the tremendous power of the market has lead many to the backward conclusion that an increasing share of human life should be subjugated to its coordination. Instead, society needs to identify the market's flaws and construct other social institutions that will champion non-commercial values with power and diligence sufficient to balance the market.

Chapter 3: Social Articulation

Inchoate Social Choice

"The Cynic," said Oscar Wilde, "knows the price of everything and the value of nothing." The same is often said about economists. While untrue on both counts, this quip does hint at a truth about economists and the price system. Price is easy; value is complex. Prices are ubiquitous, and economists can speak at length about their determinants and the efficiency criteria these prices should satisfy. But, many of our most important shared values—love, beauty, serenity, liberty—are not so easily quantified and articulated. This in itself would not be a problem except for the relative ease with which commercial values are expressed given society's current institutions and habits of thought. The danger is that while congratulating ourselves for a plethora of astutely priced commodities, we may lose a world of priceless treasures. The issue is not one of ignorance or inability but simply one of imbalance. The scale is tipped in favor of those things whose value we can most readily articulate.

At its core, the price system is a seemingly effortless communication system of Mercury-like swiftness. Society has adapted to this system by learning to think in its terms. Yet, these terms are peculiar and not suitable for all of the countless things that people hold

dear. Balance, therefore, requires either tempering the articulation of commercial values or creating institutions that can articulate non-commercial values with equal alacrity.

Decisions and Criteria

The way we as individuals and as a society approach our many countless decisions is an important issue. Our approach to this continual barrage of choices is shaped by the way we filter information, weigh options, and decide upon a course. The decision-making process can vary widely. It can be formal or informal, quick or slow, complex or simple. Yet, the way we filter information and weigh or ignore options is, to a substantial degree, shaped by habits of thought consistent with one's personality and cultural background, and this lends a degree of commonality to a variety of decisions. These habits of thought act as a set of criteria to which options must conform if they are to have a good chance of being selected. Consider diets. The world is strewn with and endless array of edible flora and fauna. Yet the vast bulk of what Americans stuff into their mouths comes from an extremely select group of edibles like pigs, cows, chickens, wheat, rice, corn and potatoes. One nation's staple, though, can be another's taboo. A delicacy for one culture might likewise turn the collective stomach of outsiders. The conscious decision about what to eat generally takes place after cultural mores and individual habits of thought have eliminated most of the possibilities. The amazing thing is that deliberate choice, though it be the focal point of economists' attention, is a nearly negligible part of the filtering process.

Criteria, whether they are explicit or tacit, are extremely important. All too often, attention is paid to the results while the process receives little scrutiny. This is unfortunate because reasoned choice demands some consideration of both the options and the decision process itself. If we want to choose a president, using primaries and an electoral college

would give us one result, using one-on-one basketball would give us another result, and using a gymnastics competition would give us yet a third result. While a bit fanciful, this example does illustrate that selection criteria are at least as important as selection results. While the selection criteria may not predetermine the results, they do eliminate certain possibilities while making others more likely. Ignoring this fact makes reasoned choice illusory.

How, then, are we to proceed? A reasonable approach would be to analyze the biases in the selection process and compare these biases to the desiderata of the outcome. A basketball tournament would favor presidential candidates who are tall and athletic, gymnastics would favor diminutive youthful candidates, and the current American system favors candidates who are tall, photogenic, rich, and politically bland. After compiling a more complete list of biases, the task would then be to compare these to the desired traits of a president. If the selection process favors an undesirable trait, then this bias should be ameliorated. If the selection process ignores an important desideratum, then this process should be augmented. Finally, if the process strongly favors an irrelevant trait then this too should be corrected because it unnecessarily filters out potentially good options. Clearly, many would also apply some higher criteria to evaluate the process itself. For example, is the process fair? Is it democratic? While not denying the importance of such criteria, the process described above is pragmatic and places greater emphasis on results than on procedure. Obviously, the two are not unrelated. We value fair contests because they do not arbitrarily filter out potentially good results. We value democratic elections because we desire public officials who are both reflective of and responsive to the public will. In other

words, it can be fairly argued that the higher values used to evaluate procedure have strong roots in a pragmatic concern about results.

This study seeks to analyze biases that affect the decisions made in modern society. Analyzing all of the biases in all types of decision is, of course, beyond the scope of this or any study. Instead, this study examines the biases contained in a few key elements which are characteristic of our society and which affect a wide range of decision processes. The approach taken here is to start from the premise that there are certain factors which characterize commercial society. These characteristics help shape our habits of thought; they affect the way we see the world, understand its problems, and prescribe a set of possible solutions to these problems. That is, it shapes our *social articulation*—the way we articulate, and act upon, our preferences and understanding of the world. Social articulation acts as a set of filters or criteria which determines not outcomes but the set of possible outcomes. In the process of social provisioning, the most likely questions and their most plausible solutions will likely conform to the tacit criteria of the prevailing pattern of social articulation. More to the point, this study argues that various elements of commercial social articulation are counter-selective for many things that are important for social and ecological health. This, of course, is hugely troubling. For like Mill, society needs to be open to all possibilities if it is to find sustainable and enduring sources of happiness. Significantly, a strong scarcity-orientation is a common thread among the biases here identified.

Social Articulation

Social articulation is the way individuals evaluate the world and express their desires in a fashion considered appropriate and which coordinates social provisioning. The phrase is meant to connote these patterns of evaluation and expression are, to a large degree, social

in their origins and consequences. By way of illustration, a seventeenth century-serf, a nineteenth-century Sioux, or a twentieth-century capitalist would view the same landscape very differently. The difference between manor, Mother Earth, and real estate is vast. However, the difference is conceptual and institutional, not incarnate. In this instance, social articulation helps define the relationship between the land and individuals by establishing boundaries within which social reproduction can occur. This book argues that, for a given situation, one pattern of social articulation may be more instrumental than another. A particular style of social articulation—be it serf, Sioux or capitalist—may be useful in some regards, but none are universally effectual. One might promote material accumulation while others may lend themselves to social stability or mobility concerns. In some nomadic cultures, for example, private property and accumulation would seem foreign because these ideas are contrary to their central values of community and mobility (Sahlins, 1972). Problems arise when patterns of articulation become entrenched and persist even when they are no longer appropriate. Such is the case with the social articulation found in modern business civilization.

Imperfectability

It is the nature of social articulation that societies will place a great deal of faith in their particular version. Few people, however, would believe that any human contrivance is perfect or that any tool could be equally useful for all tasks. Yet, the unquestioning faith that many place in the market suggests it is habitually believed to be just such an invention. Judging from its usual *modus operandi*, commercial society is clearly organized as if markets were perfectible if not perfect. Great effort is put into expanding the market's reach, establishing property rights and other institutions that are prerequisite for the market,

and tweaking the market to correct isolated and sporadic imperfections. Rarely do mainstream economists or lay-people make attempts to aggressively and systematically determine the appropriate and logical reach of the market. It is one thing to seek out new uses for a tool it is quite another to stop wondering if different tasks might require more appropriate tools.

The zealous faith placed in the market is exemplified by those who point to the market's strengths without wondering if it is possible to have too much of a good thing. The market's tremendous ability to generate commodities is met with a chorus of praise. It occurs to few that this strength might be disproportionate to society's ability to preserve the environment or nurture the institution of the family. "Social thought on behalf of the planning system," Galbraith has observed, "does not allow of inquiry as to whether increased or more efficient production of a particular product is a good thing. It is, *per se*, a good thing." (Galbraith 1967, 315) The timeless principle of balance is forgotten completely. The power of the market is greatly praised, but where else does great power not inspire widespread calls for its cautious constraint?

The faith placed in the market is not out of line with faith placed in the dominant institutions found under other forms of social articulation. All this leads us to wonder if such faith is warranted. Can any form of social articulation be perfect or should we always be mindful that the dominant pattern of social articulation may need to be augmented or replaced once it becomes out of date? This book assumes the latter. No form of social articulation is universally useful or appropriate. This is an assumption that is well founded. It conforms to Arrow's famous Impossibility Theorem. Arrow's theorem builds on the "voting paradox" examined by the Marquise de Condorcet nearly 200 years earlier (Arrow

1963, 93). Condorcet discovered that a series of pairwise majority votes could lead to intransitive results—*A* could beat *B*, *B* could beat *C*, only to have *C* beat *A*. Arrow (1963) showed that no mechanism for social choice could always be guaranteed to satisfy a short and specific list of desiderata. Or, as he stated, "If consumers' values can be represented by a wide range of individual orderings, the doctrine of voters' sovereignty is incompatible with that of collective rationality" (Arrow 1963, 60). While not all of these criteria are widely agreed upon, and while this study is interested in criteria not mentioned by Arrow, adding additional complex, multi-dimensional criteria like complying with the bio-physical dictates of ecological sustainability would only add to the dilemma outlined by Arrow.

Path Dependency

Some explanation needs to be offered as to why social articulation would be slow to evolve and keep pace with the new challenges faced by a society. A society made up of reasonably free and rational individuals, one might expect, would not long tolerate an imperfect mode of social articulation. The answer lies in the nature of social articulation itself. Social articulation is a set of ideas to which we have become socialized, and which therefore seem substantially reasonable. The weight of habit is not easily budged by circumstance. In the words of Veblen: "That heightened facility of expression in a given direction which is called habit may offset a considerable increase in the resistance offered by external circumstances to the unfolding of life in the given direction" (1899, 83). As habits of thought, social articulation seldom receives explicit reflection. It is difficult to scrutinize what remains tacit. Certainly, there is much truth in Galbraith's assertions that all ideas are inherently conservative (1958, 15) and that often these ideas are esteemed for their

familiarity rather than their validity.[16] "Familiarity may breed contempt in some areas of human behavior," argues Galbraith, "but in the field of social ideas it is the touchstone of acceptability" (1958, 6). Scitovsky (1976) also talked about how people have an affinity for things with which they are familiar. Here we have the heart of a positive feedback loop. The economy generates, or preserves, goods that are compatible with the value system reflected in a society's pattern of social articulation. The resulting mix of goods helps encourages a social articulation that will yield similar results. Societies that value fish or automobiles or women who have small feet can be expected not only to produce these goods but also to rear offspring that prefer a certain diet, a certain mode of transportation, or a particular physical trait in their mates. Though they often are, such preferences need not be explicitly taught.

Commercial Social Articulation

Before pressing on, it will be helpful to refocus the arguments made so far in this chapter. We are interested in social choice, especially at its earliest stages. This inchoate social choice is shaped by the way elements of the prevailing pattern of social articulation filter out some possibilities while making others more likely. Like all patterns of social articulation, Commercial Social Articulation, CSA, is peculiar, sticky, and biased. A reasonable way to improve upon social choice is to examine these biases and ameliorate or augment them to bring about desired outcomes. Towards this end, the balance of this chapter—as well as much of the rest of this book—examines fundamental biases in CSA. The approach taken here starts by assuming social articulation and the prevailing mode of

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[16] When he coined the phrase conventional wisdom, Galbraith defined it as "ideas which are esteemed at any time for their acceptability" (1958, 6-7).

production must be mutually compatible.[17] Therefore, elements essential to capitalism must be found in CSA. As such, this study is able to examine the peculiarities of CSA by exploring the requisites of capitalism. It is beyond the scope of this, or any, study to make a comprehensive analysis of every qualitative aspect of capitalism. Rather, the point here is to develop an analytical model of CSA by analyzing a short list of conditions requisite for capitalism. Each of these traits is fundamental to capitalism and accordingly strongly characteristic of CSA. Each contributes to a singular tendency of modern commercial society that is a key concern of this study—the systematic creation and perpetuation of scarcity.

A handful of characteristics—exclusion, dynamism, individualism, accumulation, commodification, competition, and materialism—was key to the rise of capitalism. These characteristics were institutionalized as shared and habitual way of thinking. They also had other manifestations, including statutory. Each is fundamental to capitalism and necessarily a primary characteristic of commercial social articulation. The nature and logic of an economic regime must jive with the mindset of the people whom that regime serves. Indeed, it would be difficult and fruitless to speak of an economic order without reference to the social institutions that allow the order to exist. Such an infrastructure of the mind is imperative to its acceptance and continued use. Capitalism, for example, could not exist in a society where private property was taboo or where tradition and communal obligation

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[17] Throughout this book, the author will refer to both capitalism and to commercial society. The two are not synonymous, but they are similar and, in fact, integral to each other. These terms place emphasis on two parts of the same society. The former emphasizes the mode of production and the latter the "superstructure." In both conservative and radical conceptions of capitalism, the emphasis is on a particular economic system emphasizing private property, markets and mechanized production (Heilbroner 1976, 22, 29). This book holds to that conception of capitalism and refers to *commercialism* and *commercial society* to emphasize the related social and political dimensions. The importance of theses spheres, and of their ability to

reigned supreme. Yet, commercial mores are not limited to the commercial realm. They become part of the habits of thought that shape a wide array of actions and choices made by of members of society. Consequently, while the economic order and the prevailing pattern of social articulation will be consistent and mutually reinforcing, social articulation will reach well beyond the economic realm. A eighth institution, scarcity, was useful in the rise of early capitalism and implicit in the logic of the other seven institutions. This is not to minimize the importance of scarcity in its own right. It was important, and its significance would grow tremendously under modern capitalism. Each of these institutions, their importance for capitalism and the biases they create in CSA will be examined in turn. Together, they serve as a model for better understanding strong, fundamental, and pervasive biases of our socioeconomic regime.

Exclusion

Exclusion is the power to prevent others from making use of a belonging; it is the *sine qua non* of commodity production; its importance demands the institution of property rights be a necessary early step in the creation of capitalism. In capitalist society, exclusion is found at both ends of the industrial process. Commodities are excludable, and so too are the resources used to produce them.

A good must be excludable if it is to be provided by the market. This much is made clear in the public goods literature—non-excludability leads to market failure because of free riders. The market will not provide a good, no matter how wonderful or necessary, unless businesspeople can prevent its use by the non-paying public. Of course, excludability

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shape society, have arguably been under-emphasized (in favor emphasizing the strictly economic sphere) in both the conservative and radical conceptions of capitalist society (Heilbroner 1976, 48-48).

is seen as very positive when it allows the baker to demand compensation for his labor and when the consumer can retain what she has paid for. However, there is a darker side to exclusion. Once the exclusion principle allows ability to pay to govern distribution, resources can be diverted away from great need and toward great wealth. This peculiar mechanism can also provide incentive for the "systematic withdrawal of efficiency" to curtail supply and enhance pecuniary gain. These simple but important implications of exclusion are systematically ignored by market advocates.

This power to withhold resources from production is a legal right of enormous consequence. It is central to the notion of property and it is the source of the capitalist' s coercive power (Heilbroner 1985, 38). Without the power of exclusion, personal gain would lose its potency as a force for motivating and coordinating production. Capital is a social process (36). Importantly, capital "can exert its organizing and disciplining influence only when social conditions make the withholding of capital an act of critical social consequence" (40). This requires the rise of both a capitalist class and "the appearance of a class of workers who are dependent for their livelihood on access to the tools that can be legally denied to them by their owners" (41). In other words, exclusion is not only critical to the coordination of capitalist production, it is also fundamental to the social hierarchy found under capitalism. While exclusion is critical to the reign of capital, however, it would be wrong to conclude that exclusion is very important for other social structures. Indeed, the right to exclude was a radical departure form traditional social structures. Denying peasants the guarantee of at least part of their product and stripping urban craftsmen of the ownership of the tools of production was, as Heilbroner points out, "the end product of a protracted

revolution" which started over five-hundred years ago and is ongoing in some parts of the world (41).

In addition to shaping the production, distribution, and social structure found under capitalism, exclusion is also an important seed of scarcity. Once again, both the factor and the good markets are affected. In the factor markets, exclusion promotes scarcity when people are denied access to the means of production. This has arguably been the greatest source of dissatisfaction with capitalism throughout its history. It would be impossible to overestimate how infuriating it is for able-bodied men and women to be denied the chance to do productive work and thereby provide for their families. Such hardship is more common during economic depressions, but the risk is ever present, and always someone is suffering its fate. Whether capital is withheld because of a slumping national economy, some local contingency, strategic behavior on behalf of the firm, or as a consequence of financial speculation, the result is the same: suffering and artificial scarcity.

Exclusion also promotes scarcity in the goods market because of the types of goods that are produced and the mindset that is created. As mentioned above, the market tirelessly generates vast amounts of commodities but cannot be relied on to produce public goods. This is no small matter. For if a society did find itself confronted with a scant supply of resources, then public goods would be a real boon. Since public goods can be enjoyed by many, they can offer a great way of stretching out resources. Public parks could be favored over large lawns. Immunizations, municipal water that is safe and tasty, and public safety could be favored over exotic surgeries, bottled water, and car alarms. Radio and TV could be publicly funded instead of using additional resources to sell, create, and air

advertisements. Instead, land, labor and capital are funneled into uses where the benefits need not be shared with others.

There is a distributive opportunity cost whenever resources are diverted from public to private use. Egalitarianism suffers a bit whenever a fence is placed around a piece of land or a forest is converted into toilet paper and two-by-fours. None of this discounts the possibility that purely private goods may be a highly valued use for resources because of the premium attached by the individuals who enjoy them. Nor does it deny that many public goods are currently provided. Rather, the point is public benefits and distributive opportunity costs are extremely difficult to articulate. Rather than a careful assaying of two promising alternatives, the scale is tipped in favor of private uses. Such imbalance is particularly troubling in a world faced by the prospect of making distribution more egalitarian while at the same time trying to scale back resource use to bring it in line with sustainable limits. The possibility promoting social welfare and equality through the intensive use of public goods is a strategy that rests nearly invisible and unconsidered in American society.

Importantly, many public goods need not be manufactured at all. Scenic vistas, clean air, wildernesses, and nurturing families do not need to be manufactured so much as they need to be preserved and accommodated. These goods, however, can suffer great damage in the production of private commodities. The market can no more be depended on to protect these public goods than it can be expected to provide commercial free radio or national defense. This failing is an important source of scarcity. It is inevitable that even affluent societies will be dissatisfied when it is hobbled in its ability to promote goods that are among the most cherished and steadfast sources of joy known to humanity. In short,

exclusivity fosters scarcity by restricting access to productive resources, by precluding some resource-use patterns that would help maximize the number of beneficiaries, and by enshrining the necessary condition for invidious consumption.

Dynamism and Open-Ended Flows

Like Mill, we are trained for action. Commercial social articulation is oriented towards flows. Its primary purpose is the coordination of production, exchange, and consumption. In quantitative terms, it accomplishes this task exceedingly well. By contrast, commercial social articulation is not geared towards preserving stocks of things that have long benefited society. For example, commercial social articulation poorly addresses the value of scenic vistas, biological diversity, and locales that nature has made beautiful, wild, sublime, or peaceful.

The determined pursuit of production, exchange, and consumption is commercial society's *modus operandi* for improving general welfare. As each of these three things is fundamentally a flow process, there is naturally a flow bias in commercial social articulation. It is worth examining each of these elements both for their peculiarities and for how each relates to a flow bias.

Production & Capital

Production, of course, has long been important to society. What sets commercial production apart from tradition is the extent to which it is mechanized and disembedded from society. These two things are inextricably linked. Accommodating the large-scale production made possible by mechanization required the factors of production to be coordinated by self-adjusting markets. No other institution had the capacity and

flexibility required for the task. Yet surrendering land and labor to the caprice of the market is tantamount to subjugating life itself to the whims of commerce. For what economists curtly call labor and land are, in reality, people and the whole of Nature. In commercial society, buying and selling becomes a preeminent social institution. Traditionally, economic relationships were embedded in the social fabric and buying and selling were greatly constrained. Commercial society had turned all of this on its head. Once humanity and Nature themselves were made into fictitious commodities (Polanyi, 72), social relations became embedded in economic ones (Polanyi, 57). The timeless virtues of nature and society became mere elements of capitalist production. In the words of Polanyi (1957, 42):

> Machine production in a commercial society involves, in effect, no less a transformation than that of the natural and human substance of society into commodities. The conclusion, though weird, is inevitable; nothing less will serve the purpose: obviously, the dislocation caused by such devices must disjoint man's relationships and threaten his natural habitat with annihilation.

Another thing that sets capitalist production apart is the nature of capital itself. The essence of capital is one of perpetual dynamism and flow. Capital is not a thing but a social process "*that uses material things as moments in its continuously dynamic existence*" (Heilbroner 1985, 36-37 his emphasis). This continuous dynamism helps set capital apart. Obviously all production, not just capital production, is dynamic. Capitalist production, however, is dynamic and flow-oriented in a way that other forms of production are not because it is both self-expanding and a never-ending cycle. The self-expanding characteristic of capitalism arises because the social process of capital is rooted in domination. As we saw above, the power of exclusion is necessary for capitalist production. This necessarily creates a social hierarchy based on power and coercion. This hierarchy is maintained by renewing and expanding the private ownership of capital, which

is the source of power. "Capital expands because the social relation of domination cannot be a passive one" (Heilbroner 1980, 118). Competition between the capitalists themselves also drives the self-expanding nature of capitalism:

> Competition manifests itself in the continuous threat that each capitalist poses to every other, a threat that can only be effectively countered if each enterprise itself adopts an aggressive, expansive strategy. Thus the sheer necessity for self-preservation forces capitalists to seek to expand (118).

Commodities offer a key to the endless cyclical nature of capitalism. Economies that are more traditional lean towards reconciling what individuals are able to produce with those things they want or need. Goods are sold for money so that this money can be used to acquire other goods that the household wants but did not produce. There is a *telos* and a terminability not found in the capitalist production and exchange process. The process is initiated to acquire a particular set of goods; once these goods are acquired, the process is complete. This is the commodities-for-money-for-commodities, or C-M-C, process familiar to students of Marx. By contrast, capitalist production and exchange can be characterized by M-C-M′. Money is used to buy commodities to be used in the making of more money. This "repetitive, expansive process," as Heilbroner (1985, 36) describes it, is geared towards the generation of goods and services. In doing so however, it sows the seeds of dissatisfaction and perpetual scarcity by its very nature.

> But the physical attributes of those commodities, even when they take the form of luxurious objects, are not prized as evidences of a successful completion of the search for wealth, as long as they are in the capitalist's possession. On the contrary, their physical existence is an obstacle that must be overcome by converting the commodities back into money. Even then, when they are sold, the cash in turn is not regarded as the end product of the search but only as a stage in its never-ending cycle (Heilbroner 1985, 36).

Neither commodities nor cash satisfy the search for wealth. The logic of the system is one of insatiable desire. It is the insatiability of the process, rather than the constraints of the physical world, which continues to drive scarcity.

Exchange

The focus on exchange is similarly flow-oriented and likewise creates a scarcity bias by hindering satisfaction with the current stock. Given an endowment of goods, commercial social articulation prescribes exchange as the best way of increasing one's utility. This regimen is embodied in the Edgewoth Box of neoclassical economics. This diagrammatic model illustrates exchange-driven utility enhancement. Handed a basket of goods, economists and other similarly disposed individuals would trade with each other so as to bring the mix of goods in their own baskets more closely in line with each of their individual, exogenous preferences. In doing so, each economist would increase their utility, reaching higher and higher indifference curves like rungs on a ladder to bliss. It is, no doubt, a neat trick. Without having to produce or dole out more goods, an entire room full of such folk could be made happier simply by optimizing the mix of goods in each of their baskets. However useful, production and exchange are not the only paths to happiness. It is not clear either that they are particularly well aligned with human psychology. Our enjoyment of art, nature, friends, games, music and countless other things often grows with familiarity and understanding. This need not have anything to do with additional production or exchange. To the contrary, it involves focusing on what we already possess. Preferences need not be thought of as exogenous. They can, in fact, be cultivated to reflect circumstance. It is perfectly reasonable for individuals to explore their present situation

rather than seeking happiness from things that require manufacture or exchange. Taking advantage of local cultural and recreational opportunities, cultivating friendships, exploring an area's biological, historic, and geological legacies all represent this kind of strategy. The problem is, under the regime of commercial social articulation, such options are not given consideration corresponding to their potential.

Consumption

The capitalist society's infatuation with consumption is the most subtle and bizarre way it has become oriented towards flows. It is subtle because our conception of consumption is nearly completely governed by habits of thought; it is bizarre because under the sway of these habits, the connotation of consumption is nearly opposite its meaning. The rise in consumption is often the very definition of progress. National and individual incomes receive great attention precisely because they are indicators of potential consumption. When something is consumed, however, it is used up, ravaged, destroyed. Consequently, consumption is a cost, not a benefit, of economic activity. If consumption were properly understood, then consumerism would have the same meaning as vandalism. The more consumption required generating some level of welfare, the worse our economic performance. This sounds similar to E.F. Schumacher who attached the principles of Buddhism to economics and argued "the aim should be to obtain the maximum of well-being with the minimum of consumption" (1973, 61). However, this is not the lofty ideas of Buddhist economics, rather it is just the humdrum of correcting bad accounting. Boulding demonstrated that this fundamental misconception applies to economists as well as the general public:

> There is a very general assumption in economics that income (or out-go) is the proper measure of economic welfare, and that the more income and out-go we have, the better. In fact, almost the reverse is the case. Income consists of the value of production: out-go is the value of consumption. Both income and out-go are the processes involved in the maintenance and expansion of the capital stock. I shall argue that it is the capital stock from which we derive satisfactions, not from the additions to it (production) or the subtractions from it (consumption): that consumption, far from being a desideratum, is a deplorable property of the capital stock which necessitates the equally deplorable activities of production: and that the objective of economic policy should not be to maximise consumption or production, but rather to minimise it, i.e. to enable us to maintain our capital stock with as little production and consumption as possible (1949-50, 79).

How can this be? Surely, Boulding is spouting nonsense. There is no way that our habits of thought, that economics itself, could be so completely backwards. Nevertheless, Boulding is correct. We benefit from TVs, blenders, and sofas, not from the fact that they wear out or have to be replaced. "We want houses, not because they depreciate, get dirty, sag, crack, disintegrate and need repairs:" Boulding argues, "we want houses because we can live in them, and living in them is in no way bound up with their consumption" (1949-50, 80). Certainly, we would be better off if we had a house whose condition never deteriorated in the least. Similarly, we are worse off when we consume more fuel because our car makes bad gas mileage or our home is poorly insulated.

Boulding recognizes the actual consumption of some goods, most notably food, does create utility. However, even in the case of these "one-use goods,"[18] the source is ambiguous and, in any event, "in the case of the overwhelming mass of commodities it is not consumption but utilization which is the source of satisfaction" (1949-50, 80). Consistent with our earlier concerns about the steady state, Boulding also admits that work

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[18] Boulding (80), says this is a term borrowed from Knight.

can be pleasurable. Like Veblen (1899, 29, 75) who talked about the "instinct of workmanship" or Schumacher (1973, 59) who argued that "work, properly conducted in conditions of human dignity and freedom, blesses those who do it," Boulding (1949-50, 80) acknowledges "There is a healthy pleasure in 'making things' which is derived from a fundamental 'creative urge' in human nature." A steady state society lacking in all production "would be" he argues, "very dull" (81). Indeed, such a society would have no new art, philosophy, or literature championed by Aristotle, Mill, and others. Boulding even argues some consumption is good precisely because it produces creative opportunities (81-82).

However, the realization that work can be good, does not mean production is not ordinarily a cost. There is an enormous difference between encouraging creativity and the bending of human existence around mechanized commodity production. Even the strongest supporters of the market do not argue the purpose of industrial production is the self-actualization of the worker. For his part, Veblen argues it is the very instinct of workmanship that drives people to "deprecate waste of substance or effort" (1899, 75). Schumacher also argues "To organize work in such a manner that it becomes meaningless, boring, stultifying,[19] or nerve-racking for the worker would be little short of criminal" (1973, 58). Clearly, though creativity under ideal circumstances is enjoyable, the exigency of production is still best viewed as a cost of maintaining the stock of goods that yield satisfaction. Consumption is the cost of diminishing that stock.

For their part, economists generally have a good conception of the difference between stocks and flows as well as a firm understanding that actual consumption is a cost.

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[19] C.f., Smith *The Wealth of Nations* Book V, chapter 1.

Yet, in a world where fashion and planned obsolescence are very real, and consumerism is celebrated, economists do not do enough to clarify the picture. Rhetoric, McCloskey reminds us, is important, and a consumer theory based on the *consumption function* does not help matters. Neither does the way we calculate GDP. Certainly, every sensible economist would warn against inferring too much from GDP as an indicator of welfare or of progress. However, this does not change the fact that strong inferences are made by citizens, the media, and by politicians. Who could doubt that a different political reality would exist if, for example, instead of reporting a decade of economic growth, a high-profile alternative to GDP—one that was better and more comprehensive—showed welfare and sustainability had actually declined? Boulding warned of the inadequacies of national income accounting in the 1940s, Schumacher did the same in the 1970s. Many other economists contributed their warnings and suggestions as well. Nevertheless, a comprehensive alternative to GDP has not been adopted by the US, and students in principles of macroeconomics classes are still taught that economic growth, defined as an increase in real GDP, is a normative goal. Certainly, appropriate statements of qualification and disclaim are made. However, the concern here is over imbalance and subtle bias. One suspects that students may find it easier to remember that rising GDP is good than to remember all the esoteric reasons why it may be bad or indeterminate.

The orientation towards flow lends itself to scarcity because finding joy and satisfaction in what we already have is contrary to the dictates of production, exchange, and consumption. It also creates confusion as to the actual sources of utility—so much so that we have a difficult time making the fundamental distinction between costs and benefits. "We are apt to point with pride at the achievements of our technology in increasing 'out-

put,'" remarks Boulding, "without reflecting that this is not necessarily a symbol of health, but of a wasting disease" (1949-50, 82). Finally, the Second Law of Thermodynamics tells us an emphasis on production must lead to greater and greater entropy. Keeping in mind matter-energy cannot be created or destroyed, it has been argued low entropy is the only thing the economy really consumes. In this sense, an emphasis on production and transformation is the surest path to the most meaningful definition of physical scarcity—high entropy.

Individualism and Self Interest

Individualism is an important characteristic of modern, western society. Though Schumpeter (1954, 86) cautions about drawing too sharp a distinction, in this regard, between early and modern society, we need not constrain ourselves to black and white terms to argue our society is a different shade compared to those found in the past or today in the East. With regard to the market, individualism has its most celebrated expression in Smith's *The Wealth of Nations*. However, we find many seeds for this individualism in the writings of Aquinas, Hume, and the physiocrats, for example. Of course, individualism is an important part of our political philosophy too.

The idea that social welfare can be elevated using the supreme guidance and motivation of self-interest is an important one. However, this does not preclude the fact that the individualist spirit is better suited for some things than it is for others. It is true that both markets and the democratic process allow individuals to take collective action, provide public goods, and address collective welfare. Nevertheless, transaction costs can derail both processes. In simple terms, collective action may be more of a bother than its worth. Transaction costs are especially likely to cause problems when the benefits (or costs) of an

action are widely distributed while the costs (or benefits) are highly concentrated among a small minority. In such cases, although aggregate net benefits warrant action, the transactions costs of collective coordination tip the scale in the wrong direction and prevent action. Among these transactions costs are the psychological costs of acting beyond the habitual and institutional orientation towards the individual. When the default is set on *me*, acting on behalf of *us* must be at least slightly more difficult. Such difficulties will grow more troubling if collective goods and ills become more important. In a world of six billion people, depleting aquifers, and the human capacity to affect catastrophically the world's biodiversity and climate, collective issues have grown to paramount importance. Even in this world, individualist tendencies can make some actions and policies more likely than alternative, potentially more promising, actions and policies.

The individualist propensity, in addition to biasing against habitual and spontaneous collective action, lends itself to scarcity. The difference between producing a level of a good or service adequate for ownership can be enormously different from producing a level adequate for use. Individualism helps blind us to the ridiculousness of each household owning a lawn mower that gets used a couple hours per week or a power saw or pasta maker that gets used a couple hours per year. Cooperation and borrowing from neighbors seem awkward and unnatural. Individualism plays a substantial role in our preference for cars over the development of cleaner, safer, faster and more efficient public transportation. Similarly it shapes the American approach to healthcare, which emphasizes the treatment of sick individuals over the more effective promotion of public health. Once again, the bias is subtle. Taken separately, these factors may not be necessary, and certainly are not

sufficient, for scarcity. However, taken together their impact on society's *weltanschauung* is invaluable for the paradigm of scarcity.

The Collectivist Fallacy is useful in explaining why the individualistic pursuit of one's own self interests can be counterproductive. I can leave the stadium a few minutes early and beat the traffic unless the other individuals do the same. I can bring a highly desirable product to market and enjoy a substantial return on my investment unless others decide to do the same thing. In short, many things can be enjoyed by an individual, or a handful of individuals, but that may not be enjoyed by any if too many try to do the same thing. The problem is individual decision makers can be depended on to weigh only their own expected costs and benefits. However, they can neither predict the behavior of others, thereby anticipating how they might be affected, nor can they estimate how their own behavior will affect the welfare of others. This same class of problems may be described differently as a problem of open access. Resource economists know that the open access problem causes individuals to over use, in often-catastrophic ways, a particular resource such as a fishery. Optimal use of this resource demands access be restricted as a check on individualist propensities. Instances in which the Collectivist Fallacy applies are innumerable. Choosing a marketable major in college, a route home from work, a vacation destination, a place to build a home, a place to dine, a time to run to the grocery store are all examples. Fred Hirsch (1976) has shown that in affluent societies, the welfare effects of such instances are increasingly important. In fact, Hirsch argues individual choice and social welfare have grown so divergent as to undermine the rationale for the individualistic economy.

Accumulation

The accumulative drive is such a part of the habit of thought in our society that it seems innate, and it is difficult to imagine things being otherwise. However, this drive would have seemed strange to many societies throughout history and across the globe. Consider this passage about the native Americans of the Southeastern United States:

> An important difference between the economic system of the Southeastern Indians and modern capitalistic economics is that the Indians placed no value on the accumulation of wealth. They held, in fact, a contrary value. While some of them were undoubtedly better off than others, the differences would never have been very great because to them a good person was a generous person, and one of the worst things of which a person could be accused was stinginess. They would have understood better than we the Biblical dictum that it is better to give than to receive. The social pressures to be generous would have been strongest among lineage and clan members, but this generosity also extended to non-kin. When Cherokee warriors were given presents by the British for their services in military actions, they would share their gifts with other Indians and with white soldiers who took part in the actions. The early European explorers and traders were constantly astonished by the generosity of the Indians. It was one of the traits which led the Europeans to believe that the Indians had a childlike nature. The Southeaster Indians, for their own part, were baffled by the acquisitiveness and stinginess of the European colonists, whom they compared to cougars. The cougar, they said, is an animal that will sometimes kill two deer at one time, more than it can possibly eat, and yet it will lie between the carcasses, too greedy to be willing to share its surplus. The Indians saw no point in piling up more property and goods than they could use, and if they did have a surplus, the only decent thing was to share it with others. (Hudson 1976, 311-312).

It is not as if such acquisitiveness is the inevitable conclusion of Western culture. We have already mentioned the Greek principle of the golden mean. There is also the biblical dictate not to store up treasures on earth but in heaven, for wherever your treasure is that is where your heart will be (Matthew 6:19-21; Luke 12: 33-34). Certainly, for many centuries, heavenly riches were the only riches to which most people could look forward.

Once again, an explanation of this aspect of social articulation is found in the logic of capitalism itself. "The logic of capitalism," argues Heilbroner, "must also express the imperatives of accumulation" (1985, 142). He further points out that:

> the dynamics of this logic have been the main research objective of all the great economists. The works of Smith and Mill and Marx and Keynes and Schumpeter describe the outcome of a grand drama of accumulation that all recognize as constitutive of and inseparable from, the innermost principle of being of the system they are studying (1985, 142).

Factor markets were necessary to accommodate mechanized production. The functioning of such markets required substituting the motive of gain for that of subsistence (Polanyi 1957, 41). Classical concerns about the rise of a stationary state illustrate the importance placed on accumulation. The stationary state would arise when further capital accumulation was denied by falling profits. Under the reign of capital, the powerful forces of self-preservation, prestige and power drive accumulation (58). We have already discussed how capitalism is relentlessly expansive. Certainly, accumulation is an inseparable part of this process. Without it, there is no growth, no affirmation of power, no continued profits, no defending one's social and economic position against the rise of other capitalists.

Money and modern commodities also facilitate accumulation. Foodstuffs and other perishables are naturally limited in how much can be used or accumulated by an individual. For John Locke, it was these limitations that helped prevent the iniquity of waste (Spiegel 1983, 164-5). Goods that are more durable are not so limited, and, for Locke, the threat of waste no longer a problem. Money, in particular, can be accumulated without end and without concern about spoilage or storage. This is especially true of modern forms of fiat money. Electronic *ones* and *zeros* are infinitely more accumulable than gold, tobacco or

giant stone coins. So modern commodities and currency provided the means, and Locke the rationale, for the accumulation demanded by the logic of capitalism.

Rivalry and Competition

Rivalry is another key element to commodities. The smooth functioning of the market mechanism typically requires one person's enjoyment of a good to preclude the simultaneous enjoyment of that same good by another. The problems caused by a lack of rivalry are most apparent in public goods. These goods are neither rivalrous nor excludable. When multiple people benefit from a good, like national defense or the preservation of cultural and ecological treasures, each individual (promoted by a competitive self-interest) may hope the others will pay for it, allowing them to "free ride." This free-rider problem discourages entrepreneurs from providing such goods. Importantly, non-rivalry and exclusion are two separate issues that are not always linked to each other. However, the two are often related because rivalry can make exclusion easy, while the lack of it can make exclusion more difficult. Ordinarily one's consumption of a good would exclude others from enjoying that same good. With non-rival goods, such automatic exclusion is not forthcoming and great efforts are made to ensure some kind of artificial excludability. The broader point is simply this: for individuals and society, rivalry makes articulating the desire for a good easier.

Competition is one of the most celebrated aspects of the market economy. It is praised in Darwinian terms even by those for whom social Darwinism has negative connotations. Economic perfection is called, by the orthodoxy, *The Competitive Ideal.* Competition is important at all levels of the economy. Competition between business, the argument goes, keeps prices down, discourages waste, and encourages innovation.

Competition among consumers, ensures commodities go to those who value them relatively the most, discourages frivolity, and eliminates any shortages by driving prices up.

Certainly, the realization that struggle and competition can have beneficial results, is a wonderful insight. However, competition is not entirely beneficial, nor is it universally appropriate. First, there are many ways of addressing competitive pressures, such as skirting safeguards intended to protect workers and the environment, that are socially undesirable. As will be discussed later, these alternatives may be more cost effective, from the standpoint of the decision maker, than the more progressive responses just mentioned. Second, the very fact competition compels people do what they otherwise would not (such as cut prices or minimize waste) creates incentive to avoid such competition.

There are several ways that habitually seeing ourselves as rivals in production and consumption can promote scarcity. Generally, like all of the other filters of CSA, it sifts out courses of action that might have been selected using strictly instrumental criteria. More particularly, competitiveness complements individualism in selecting against cooperative action. Those habituated to competition may find it difficult, for example, to find solutions for providing public goods. This issue is likely to grow in importance as the economy grows into what is commonly called the Information Age. Information, particularly digital information, is non-rival in consumption. Since it can be easily and repeatedly duplicated, such information can be enjoyed by many simultaneously. The very low marginal costs of providing this information to other users creates elements of both a public good and a natural monopoly. Championing competition may raise prices on the supply side and encourage free-riding on the demand side. Producers and consumers, each trying to best the other, may come to an impasse. Consider the case of digital music in MP3

format. It is now relatively easy for consumers to get high-quality audio recordings for free, or, more to the point, by free riding. Music companies, for their part, have *cooperatively* scrambled to shut down unauthorized MP3 sources, like Napster, while simultaneously trying to open their own competing commercial sources.

The problem is consumers cannot expect a continued supply of new music if nobody ever pays, and producers cannot expect multiple commercial sites to be as attractive as one umbrella source providing music from all the record labels across the globe. A workable solution may very well call for a cooperative effort by industry, consumers, and the government—no small feat for a society habituated to relying on free-market competition. In lieu cooperative efforts, industry will rely on the courts to create an artificially scarce supply of a potentially measureless good. Consumers, of course, can be counted on to try to subvert these efforts.

Another problem with competitiveness worth mentioning is conspicuous consumption. This phenomenon is well known and predictably encouraged by producers. When the competitive habit manifests itself as desire for a newer car, bigger house, or better-dressed children than one's peers and neighbors, it promotes scarcity. This is a rat race where the neighborhood is chasing its collective tail. Logically, there can be no winner or conclusion, only perpetual frustration. Each victory for one household necessarily fuels feeling of insufficiency among the neighbors.

Materialism

Materialism is so strong in commercial society that it permeates the normative criteria by which we judge the economy, society, and even each other. More often than not, when we speak of a good economy, a healthy economy, or when we speak of efficiency, we

are referring the capacity for material production. Our habitual bias in this regard is so engrained that it usually goes unnoticed and therefore unchallenged. However, we could just as easily talk about a good economy being one that promoted beauty or peace or justice or sustainability or nurturing families. Efficiency, then, would refer to the efficacy with which we pursued these alternative goals. Any one of these goals is arguably as important, or more important, than material production. This is especially true in a society that has already achieved material affluence.

"The Industrial Revolution was merely the beginning of a revolution as extreme and radical as ever inflamed the minds of sectarians," argues Polanyi, "but the new creed was utterly materialistic and believed that all human problems could be resolved given an unlimited amount of material commodities" (1957, 40). The bias towards materialism is readily understood when one considers its centrality in capitalist production. The regime of capitalism is built upon the machine process—a process whose sole dimension is the material. The machine process is one of material flow. It is a process that is so relentlessly dynamic that its feeding required the creation of self-regulating markets and the cultural norms that would accommodate such a contrivance. In the words of Polanyi, "the gearing of markets into a self-regulating system of tremendous power was not the result of any inherent tendency of markets towards excrescence, but rather the effect of highly artificial stimulants administered to the body social in order to meet a situation which was created by the no less artificial phenomenon of the machine." (1957, 57). In accommodating the machine, society subjugated a long list of human aspirations to gauche materialism. Elsewhere, Polanyi argues our "animal dependence upon food has been bared and the naked fear of starvation permitted to run loose. Our humiliating enslavement to the material,

which all human culture is designed to mitigate, was deliberately made more rigorous." (Polanyi 1947, 115 quoted in Sahlins, 28)

The problem with the bias towards materialism is that many of what Mill might describe as "our perennial sources of joy," are, of course, immaterial. Clearly, even the slightest leaning away from the immaterial has dramatic implications for social welfare. Friendship, love, and beauty, for example, are among the most reliable, enduring, and powerful contributors to human happiness known. It is not that we do not value the immaterial. None of the biases discussed here prevent human valuation. Rather, our concern is with the effective articulation of value. Biases in CSA hinder the effective articulation of certain types of values so that it becomes difficult to coordinate the promotion and pursuit of these values. It is the way some find it easier to obtain a jumbo TV with picture-in-picture and surround sound than it is to find time to spend with a spouse. It is the way we can easily obtain commodities from around the world, yet obtaining peace, relaxation, clean air, and communion with nature are accomplished indirectly and incompletely by buying expensive vacations. It is the way our desires for good schools and public safety are expressed by buying a big house in a nice neighborhood. It is the way television and Happy Meals™ are convenient substitutes for giving children time and attention.

The subtle but pervasive orientation towards scarcity is compounded when the elements of CSA are taken together. Individualism coupled with competition and exclusivity, for example, discourages the pooling of resources and obscures the fact that collective action is often a necessary and straight-forward, efficient approach to some of society's problems. Individualism, materialism, competition, and acquisitiveness help fuel

sophomoric acts conspicuous consumption. Jointly and severally the elements of CSA filter social provisioning options—selecting against those that do not conform to the logic of the market and for options that help to facilitate scarcity. "Contemporary industrial society is so permeated with a market, privatistic bias," argues Stanfield, "that to date it has been unable to transcend the habit of seeking priorities—ends vis-à-vis means—in market prices and commodities. Economists continue to neglect the intangible and the collective in their search for priorities" (1979, 109).

Commodification

The commodification of life is essential to capitalism. One cannot produce everything she needs and at the same time take advantage of the benefits of mechanized production and the division of labor. In a market economy, these goods must be produced for sale—they must be commodities. Additionally, the factors of production, if they are to be coordinated by the market, must also be for sale. "Machine production in a commercial society," explains Polanyi, "involves, in effect, no less a transformation than that of the natural and human substance of society into commodities" (1957, 42).

Commodification lends itself to scarcity in several ways. Most of these we have already covered. First, as we have seen, the M-C-M' cycle is endless and insatiable. Also, commodities are, by their nature, all of those things we have been discussing: exclusive, individualistic, rivalrous, and materialistic. There is also the fascinating dynamic between commodities and human desires described by Sahlins:

> Consumption is a double tragedy: what begins in inadequacy will end in deprivation. Bringing together an international division of labor, the market makes available a dazzling array of products: all these Good Things within a man's reach—but never all within his grasp. Worse, in this game of consumer free choice, every acquisition is simultaneously a deprivation, for every

> purchase of something is a foregoing of something else, in general only marginally less desirable, and in some particulars more desirable, that could have been had instead (1972, 4).

Scarcity

So far, we have examined seven elements of CSA. These biases exist because capitalism, along with the habits of thought and other institutions which accommodate capitalism, is oriented towards that which comply with the dictates of exclusion, dynamism, individualism, acquisitiveness, competitiveness, materialism, commoditization. Each element, it must be emphasized, is an important bias in its own right. Each also contributes to a bias of scarcity. Yet, scarcity is not simply a derivative of these elements of CSA. Scarcity has long been an explicit part of CSA, and it is worth examining scarcity as an element in its own right.

The final element of CSA is scarcity. The assumption of scarcity is important both because it is believed to be the economic problem and because the common thread shared by each of the previous elements is that they each promote and reinforce scarcity. Ironically, scarcity, as we shall see, becomes a more explicit element of CSA as society grows more affluent. Nevertheless, it has always been an important part of capitalism. Factor markets demand people who *have* to sell their labor services. Goods markets demand people who *have* to buy commodities. This is what Polanyi referred to when he said "for the motive of sustenance that of gain must be substituted" (Polanyi 1957, 44). The market system could not function in a nation of self-sufficient homesteads. Heilbroner explains the importance of scarcity to the meaning and function of scarcity in the creation of wealth:

> In simple egalitarian societies, where all have equal access to the resources needed for the maintenance of a conventional way of life, wealth cannot exist, although prestige objects can. Per contra, wealth can only come into existence when the right of access of all members of society to an independent livelihood no longer prevails, so that control over this access becomes of life-giving importance. The corollary is that wealth cannot exist unless there also exists a condition of scarcity—not insufficiency of the resources themselves, but insufficiency of means of access to resources (Heilbroner 1985, 46).

Similarly, Sahlins points out:

> The market-industrial system institutes scarcity, in a manner completely unparalleled and to a degree nowhere else approximated. Where production and distribution are arranged through the behavior of prices, and all livelihoods depend on getting and spending, insufficiency of material means becomes the explicit, calculable starting point of all economic activity (1972, 4).

The theme of this chapter is twofold. First, CSA is biased so that our desire for some goods is more readily articulated than our desire for others. We expect, for example, commercial society will more easily provide simple commodities than goods that need preserving instead of producing and which would be freely and readily available for all to share. The second theme is that the central and unifying bias of CSA is the institution of scarcity. In this regard, the elements above compound and reinforce each other. Commodification makes accumulation limitless, for example, while individualism, competition, and exclusion can combine to make an invidious brew. Taken individually, the first five elements of CSA have a subtle scarcity bias. Taken together, the bias is overwhelming. The elements described above dominate CSA because they are instrumental to the functioning of commercial industrial society. More than this, however, these very same elements greatly facilitate the institution of perpetual scarcity.

If one were given the unpleasant task of designing a society that would be forever plagued by scarcity, it would be difficult to imagine a better approach than to organize a

society around the mores of CSA. At first, it might seem impossible to prevent a playful, brilliant and industrious species from finding contentment on a lavishly fecund planet. But if these peoples' very culture and economy could be structured around an endlessly acquisitive drive, if denying others the use of one's possessions was not only a right but a responsibility, if people and Nature could be thought of as merely ingredients in commodities or moments in the continuous transformation of capital, if individualism and competition could be thrown into the mix to help prompt invidious comparisons, then scarcity could reign supreme. The irony, then, is that the very elements that make commercial society fabulously productive contain within them the seed of insufficiency. There is a *contradiction* in CSA: it is at once enormously productive in the material sense and counterproductive to human fulfillment. It performs a task while at the same time ensuring the task can never be completed.

Another way to illustrate this point is to contrast CSA against societies for which scarcity was not an overriding concern. In *Stone Age Economics* (1972), Marshall Sahlins draws on anthropological surveys of hunter-gathers to show that they were, in his words, "The Original Affluent Society." These were generally tight-knit communities organized around kinship and reciprocity rather than self-interested individualism. Acquisitiveness was never developed (13) because possessions hindered the group's critical ability to be mobile. In fact, these cultures were so disinclined towards acquisitiveness that they have often been criticized for not even storing food as a hedge against starvation (30-32). Similarly, rather than exclusion and competition, these societies are characterized by cooperation and are "properly famous" for their "liberal customs of sharing" (10). Significantly, communalism, cooperation, sharing, and the lack of acquisitiveness

complement and compound each other to promote sufficiency and mobility just as the elements of CSA complement each other to promote scarcity. The !Kung, for example "have not wanted to encumber themselves with surpluses or duplicates. They do not even want to carry one of everything. They borrow what they do not own. With this ease, they have not hoarded, and the accumulation of objects has not become associated with status" (Marshall, 1961, quoted in Sahlins p. 10). Finally, they were not driven to produce commodities, or a surplus of goods for sale, nor did they produce an endlessly expanding capital base. Instead, they worked neither hard nor continuously (17). Enough food was obtained to sustain their community. Reasons to work beyond this were apparently not compelling. Their limited economic resources were underused (17). Tools, for their part, were simple and made from the resources at hand. This, combined with sharing, ensured that they were readily available to all without excessive duplication. Tools could even be abandoned as they were easily reproduced elsewhere.

Sahlins contrast the original affluent societies to today's commercial society:

> The market-industrial system institutes scarcity, in a manner completely unparalleled and to a degree nowhere else approximated. Where production and distribution are arranged through the behavior of prices, and all livelihoods depend on getting and spending, insufficiency of material means becomes the explicit, calculable starting point of all economic activity (Sahlins 1972, 4).

"Scarcity" he goes on to argue, "is the judgement decreed by our economy" (1972, 4).

The scarcity bias contained in the elements of CSA are not the only way CSA accommodates the perpetuation of scarcity; CSA also promotes scarcity by its limited scope. Any good that slips through our fingers simply because our limited ability to articulate its value, or the full tragedy of its loss, must necessarily contribute to our dissatisfaction.

Articulating our desire for pencils[20]—even if their production is a complex international process—is easy. Articulating our appreciation of a view of the heavens is extraordinarily difficult. So difficult in fact, this view—which is synonymous with beauty itself, has been a source of awe, inspiration, and joy to civilizations throughout history, and around the world—has been needlessly, lost to most Americans and Europeans[21]. So the imbalance in our social articulation poses a double threat. It favors goods, as we have seen, whose very logic incites scarcity. At the same time, as we shall see, it disvalues the non-commercial sphere, allows costs to be shifted into this sphere and perpetuates its decline.

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[20] In *Free to Choose* (1981, 3-5), Milton Friedman recounts the story "I, Pencil." The parable celebrates the coordinating power of the market by arguing no individual actually knows how to make a pencil. Instead, pencil production requires the efforts of thousands of miners, loggers, truckers, and a host of other workers. Counting the secondary and tertiary supporting industries would make the list of workers grow exponentially. Here, we seem to be making the same point: the market can coordinate the *production* of *commodities* amazingly well. Interestingly, a pencil prominently appears with Professor Friedman on the cover photo of the book.

[21] Like other forms of pollution, light pollution is a waste product. Most of the light that washes out the heavens is obviously not lighting up its intended terrestrial target. Better lighting design can drastically reduce pollution while saving money and improving visibility. See, for example, Howe (1986).

Chapter 4: The Modern Context of Commercial Social Articulation

This chapter looks at the modern context of commercial social articulation. In particular, it examines how modern capitalism differs from early capitalism, how these differences affect social articulation, and how these changes have been masked by belief in ideals more properly describe the old system. Society itself is much more affluent and corporations have grown into monstrous multinational juggernauts of enormous wealth and power. These changes corresponded to the rise in mass production which demanded that society be further aligned with the needs of capital. In addition to these changes in scale, two striking traits of modern capitalism are the retreat from the market by corporations and the rise of globalization. To escape the market's caprice, business was withdrawn from the market and placed under planned administration. "This", in the words of Baran and Sweezy, "represents a continuous increase in the rationality of the parts of the system, but it is not accompanied by any rationalization of the whole." Instead, "the principle of *quid pro quo* turns into the opposite of a promoter of rational economic organization and instead becomes a formula for maintaining scarcity in the midst of potential economic plenty" (1966, 337). A key aspect of this withdrawal from the market is directed articulation. The creation and manipulation of consumer wants allows for greater planning and control, but it is so contrary to accepted commercial social articulation that it must be concealed in the competitive, individualistic packaging of the myth of consumer sovereignty. Finally,

revolutionary changes like jet travel, satellite communications, computers and the Internet, have complemented global trade-promoting institutions, like those associated with Bretton Woods, to effectively shrink the world and promote global commerce. These changes have increased the pressure to shape social articulation around the needs of capital production.

The Rise of Mass Production and Mass Consumption

Unparalleled Affluence

A century after Malthus and Ricardo had worried about scarcity placing a damper on the economy, a new problem started to emerge. Rather than the supply constraints of the classical economists, insufficient demand threatened the long-run trend of economic growth. Productivity had increased enough to ensure workers could meet their basic needs as well as enjoy a few comforts. When it came to the benefits of increased productivity, turn-of-the-century workers preferred more leisure to more income (Rifkin 1995, 19). This posed a threat to business. The point, after all, was to sell goods. If they could not do that, it did not help to have workers who could produce more commodities more quickly. Where's the profit in closing shop and going home at noon? Workers also stood to lose. More productivity meant the same commodities could be produced with fewer workers. Without policies to reduce workweeks and restrict overtime, many workers would be unable to find work while others were forced to work long hours.

As productivity exploded, the problem became more urgent. Between 1919 & 1929 alone, manufacturing output per labor-hour increased at a rate of 5.6% per year (Rifkin 1995, 18). From a business standpoint, a radical change was desperately needed. A trade journal of the time recognized that "the future of business lay in its ability to manufacture

customers as well as products" (quoted in Ewen 1976, 53). The resulting revolution was the deliberate, determined, systematic creation of the consumer culture. The problem was nearly the opposite of the concerns of Malthus and Ricardo. Mass production, not diminishing productivity, was the problem, and consumers' appetite for commodities, not the manufacturing might of industry, formed a bottleneck. Accordingly, the solution called for a reversal of American mores:

> Parsimony and savings were the cornerstones of the American way of life, part of the early Yankee tradition that had served as a guidepost for generations of Americans as well as an anchor for newly arrived immigrants determined to make a better life for their children's generation. For most Americans, the virtue of self-sacrifice continued to hold sway over the lure of immediate gratification in the marketplace. The American business community set out to radically change the psychology that had built a nation—to turn American workers from investors in the future to spenders in the present. (Rifkin 1995, 19-20).

General Motors helped lead the way. The company introduced "annual model changes in its automobiles and launched a vigorous advertising campaign designed to make consumers discontent with the car they already owned" (Rifkin 1995, 20). GM's Charles Kettering championed the new business philosophy in stark terms. "'The key to economic prosperity,' said Kettering 'is the organized creation of dissatisfaction'" (Rifkin 1995, 20).[22] So there it was in a nutshell. Scarcity was turned on its head. From a Classical concern about material privation, it was transformed into the deliberately created sociological artifact of consumer dissatisfaction. From something that would ultimately limit the economy, it became that which would perpetually drive the economy. Equally as dramatic, the

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[22] Rifkin (1995, 365, n 12) sites the provocatively entitled article, "Keep the Consumer Dissatisfied" in *Nation's Business*, as the source of this quote. *Cf.*, Galbraith (1967, 267) "The economy, for its success, requires organized public bamboozlement."

Economic Problem was shifting from addressing the wants and needs of people to accommodating the demands of capital and mass production. Mass production rescued society from the Classical specter of the stationary state, but required constructing a consumer culture sufficiently ordered and uniform to accommodate the grand-scale of modern production.

In describing this re-ordering of society, three important points need to be made clear. First, consumer society must be seen as a construct very much concerned with the needs of capital, not simply the needs of consumers. Human needs were to be trained so that they would better accommodate mass production. This imperative was explicitly recognized at the time. In the Orwellian words of Edward Filene, businessman and industrial spokesperson, "Mass production demands the education of the masses" (Ewen 1976, 54). Second, the construction of a consumer culture required refracting a wide range of human impulses, aspirations, concerns, and desires into the manifest behavior of commodity consumption. To the greatest extent possible, social articulation was to be focussed around the commodity. Third, the inherent uniformity of mass-produced commodities demanded the homogenization of consumers. Each of these three points will be elaborated on in turn.

Under mass production, the productivity gains from specialization and the division of labor and from other economies of scale are incredible. The resulting contribution to the material welfare of humanity has likewise been extraordinary. However, it would be wrong to believe that these substantial benefits are without costs. Adam Smith, for example, pointed to the toll on workers. Smith worried about the stultifying effect of a worker focusing on a simple, narrow, repetitive task. Smith argued such jobs would make people

"as stupid and ignorant as it is possible for a human creature to become" (1971, 264). A related pitfall appears on the consumption side of the economy. The nature of mass production is the manufacture of large quantities of uniform goods. This seems innocuous until one considers that it does not lend itself well to such things as thrift, craftsmanship, self-reliance, localized production, or idiosyncratic tastes. Mass production of automobiles and foodstuffs and toiletries and clothing and appliances and countless other goods and categories of goods, first meant that consumers had to spend. Second, it meant that millions of individuals with different backgrounds, religions, ethnicity, and personal preferences must somehow be willing to buy the exact same things. To overcome these obstacles, mass marketing had to create a consumer culture. "While line management tended to the process of goods production, social management (advertisers) hoped to make the cultural milieu of capitalism as efficient as line management had made production" (Ewen 1976, 33).

This is why the consumer culture must be seen as a response to the needs of capital. The rise of mass production does not take place in a cultural vacuum. Workers had to be concentrated into cities. Consumer spending had to skyrocket along with productivity, and thriftiness and self-reliance could not be allowed to interfere. Varied tastes and aspirations needed to reliably and predictably motivate a diverse population to buy the same commodities. As an additional challenge, in the United States all this had to be achieved in a nation that valued individualism and self-sufficiency and that was a jumbled collection of immigrants. "The transcendence of traditional consumer markets," writes Ewen, "required people to buy, not to satisfy their own fundamental needs, but rather to satisfy the real, historic needs of capitalist productive machinery" (1976, 35-6). Inspired by industrial achievements and armed with the growing science of psychology, business faced the

challenge of cultural transformation with confidence. In the modern production-consumption nexus, "raw materials and consumers were both viewed as malleable" (Ewen 1976, 26). National ad campaigns could get people to spend and tell them what exactly to purchase. "The functional goal of national advertising was the creation of desires and habits. In tune with the need for mass distribution that accompanied the development of mass production capabilities, advertising was trying to produce in readers personal needs which would dependently fluctuate with the expanding marketplace" (Ewen 1976, 37).

The second important part of the construction of a consumer culture was creating habits of thought that tied commodity consumption to extensive human considerations where no logical or necessary link existed. The evolving social articulation had to provide commoditized expressions for sentiments like patriotism, good parenting, and sexuality. The future of mass production required spiraling consumption that would be sufficiently ubiquitous and unflagging even in the face of growing affluence and comfort. This demanded harnessing the full myriad of human drives.

One needs to remember that the task before business was not simply to prompt consumers to accept products for which they previously felt no great need. An affinity for novelty assists that task (e.g., see Skitovsky, 1976). However, these products were not free. The greater challenge was prompting people to work hard and sacrifice time with family and friends to acquire this sundry esoterica. The threat was exactly the malaise from which Mill had suffered and feared would plague posterity. When economic progress allowed all to be free and comfortable, then what would continue to drive us? What would bring us joy? Mill believed the answer would come from turning inward and cultivating our passive susceptibilities. Alas, Mill's path was impossible to recognize, much less follow, under

commercial social articulation. The evolving social articulation already focused too much on materialism, dynamism, commodification, and accumulation to see Mill's internal passive susceptibilities. This astigmatism would only grow. For the champions of mass production, it was far better to artificially perpetuate privation than to follow Mill.

Mill had worried that "the pleasures of life, being no longer kept up by struggle and privation, would cease to be pleasures" (1961, 90). Obviously, Mill underestimated the human capacity to find struggle and privation even in the most comfortable circumstances. Nothing shows that more clearly than the busy & chaotic lives that American families are leading after a century of technological progress that dwarfs all prior progress in human history. The explanation for this rests substantially on the extent to which a wide range of human sentiments were translated into feelings of dissatisfaction with one's current level of commodity consumption. That is, the key was the extent to which social articulation lent itself to the creation and perpetuation of scarcity. Consumerism was increasingly identified with democracy and freedom (Ewen 1976, 27-30, 94), prestige (35), civility (41), nationalism (42), beauty, romance, grace, security (46-7), success (157), and good parenting (169, 175). In a nation of immigrants that was moving away from traditional familial, communal, and economic structures, advertising showed people what goods they needed to buy in order to fit in, be successful, and create order in their world. Through advertising, "business hoped to create an 'individual' who could locate his needs and frustrations in terms of the consumption of goods rather than the quality and content of his life (work)" (43). Values contrary to CSA were a barrier to the accommodation of mass industrial production:

> Traditional family structures, agricultural life styles, immigrant values which accounted for a vast percentage of the attitudes of American working classes,

> and the traditional realms of aesthetic expression—all of these were infused with an agglomeration of self sufficiency, communitarianism, localized popular culture, thrift and subjective social bonds and experiences that stood, like Indians, on the frontiers of industrial-cultural development. It was these subjective experiences of traditional culture that stood between industrial machinery and the synthesis of a new order of industrial culture. And it was incumbent on industry, in formalizing the new order, to find a means to sacrifice the old (Ewen 1976, 58-9).

In short, values and habits that might lend themselves to Mill's "due balance" and "internal joys" had to be discouraged. To encourage new habits that included the consumption of a growing array of commodities, it was necessary to emphasize values consistent with CSA.

Advertising linked a wide range of human interests to the consumption of commodities. Even Feminist aspirations were sublimated into demand for such things as tobacco, vacuum cleaners, and toasters (Ewen 1976, 160-161). Echoes of this usurpation of a feminist agenda can be heard today in commercials and morning talk shows that cheer women who buy SUVs or shop at do-it-yourself stores.

Insecurity was chief among all the motivators to which commodity consumption was harnessed. These feelings of social inadequacy translated particularly well into feelings of commodity insufficiency That is, people would articulate, and act upon, their insecurities by buying commodities. In this way, self doubt was transformed into scarcity. "The determining factor for buying," argues Ewen, "was self-critical and ideally ignored the intrinsic worth of the product" (1976, 37). In harnessing self doubt, ads encouraged people to shift their critical eye away from the commodities and onto ones own body, habits, and culture. For the individual, "Ads constantly hammered away at everything that was his own—his bodily functions, his self esteem—and offered something of theirs as a socially more effective substitute" (Ewen 1976, 46). Such ads "intimated that anything natural about

the consumer was worthless or deplorable, and tried to make him schizophrenically self-conscious of that notion, they offered weapons by which even people with bad breath, enlarged nose pores, corned feet and other such maladies could eclipse themselves and succeed" (47-8). Perhaps worse, ads exploited both ethnic tensions and emigrants' desires to become "American." The key to blending in and succeeding in one's newly adopted country was to consume the correct types of commodities. "Often, such ads were geared to make people ashamed of their origins and, consequently, the habits and practices that betrayed them as alien" (43) Commodities associated with Americanization include the proper diet and wardrobe, proper mode of transportation, language lessons to reduce accents, and English-language newspapers.

This brings us to our third and final point about the construction of consumer society. The mass production of homogenous goods required society to be increasingly homogenous. Differences in individual tastes, location, and ethnicity threatened to prevent industry from taking full advantage of economies of scale in production and distribution. A new standard of behavior had to be created that would apply to all, regardless of their backgrounds. The parameters of this new cultural norm would be defined in terms of the consumption of commodities. Cultural homogenization offered business greater predictability and control, and increased reliance on commodities. A more uniform society was not sufficient. The homogenization had to be centered around the creation of a consumer culture. For "if the distribution of mass-produced commodities was to succeed, indigenous popular attitudes had to be supplanted where they tended to look elsewhere for the satisfaction of material and social needs" (Ewen 1976, 81-82). The commercial socialization of immigrants was especially important. "Immigrants would be Americanized,

a process identical to an abolition of their common memories and the replacement of them by a 'mass' perception keyed to the vaulted aspirations for mass-produced goods" (104). Today, people often identify one of the sources of cultural malaise as the bland sameness of our lives and communities. Wal-Mart and McDonalds are simply seraphim guarding the gates to our collective monotony. Music, art, entertainment, food, architecture, and clothes are indistinguishable from one suburb to the next. Certainly, this is the price we pay for the material affluence made possible by mass production. Yet, the habits of thought that we use to evaluate and articulate the merits of this tradeoff are also an artifact of industrialized mass production. If we desire a more appropriate tradeoff, then we would do well to examine the biases in our habits of social articulation and other economic institutions. The results may be easier to see, but it is the process that is skewed and needs correcting.

Corporate Growth and the Withdrawal from the Market

The ascendancy of the corporation distinguishes modern capitalism, and the gigantism of corporate capitalism boggles the mind. Adam Smith, one can speculate, would scarcely have imagined today's world, where it takes fewer than a dozen companies to rival the output of his Great Britain.[23] Together, the dozen biggest giants employ over 3.11 million people and have revenues that exceed $1.39 trillion. This figure is roughly similar to the combined GNPs of China and India—two nuclear powers with more than a billion people each. There are only ten countries in the world whose GNPs would exceed the

[23] The world bank lists the UK's 1998 GNP as roughly $1.26 trillion. Based on to *Fortune* magazine's *Global 500* available at http://www.fortune.com. The combined 1999 revenues of the top 11 corporations was roughly $1.3 trillion

combined revenues of the three largest car companies.[24] Any of the largest 100 corporations would dwarf the economies of the majority of countries.[25] Such companies have little similarity to the butcher, brewer, and baker that Adam Smith wrote about in the *Wealth of Nations*.

The change in business was more than just a change in scale. The size of giant corporations lead to new goals and to the power to achieve these goals. In the first place, its owners do not make the innumerable daily decisions affecting a corporation. There are many shareholders of a typical corporation; few understand the concepts of engineering, chemistry, law, or international finance that shape the array of decisions facing the corporation. A local brewer of modest means, one can reasonably expect, will diligently pursue profits, for each additional tupence worth provides sustenance for himself and his family. The same cannot be safely assumed of managers and engineers who earn comfortable salaries apart from a company's profits. This technostructure, as Galbraith (1967, 65) defined those "who bring specialized knowledge, talent or experience to group decision making," has other motivations. The goals, Galbraith has explained, are to "minimize the risk of loss and therewith of damage to the autonomy of the technostructure, and secondly, to maximize the growth of the firm with concomitant attention to rising profits" (1967, 173). As an affirmative goal, growth is crucial because "Expansion of output means expansion of the technostructure itself" (Galbraith 1967, 153). An expanding

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[24] Revenue and employment figures are from the Global 500. The GNP figures are from the World Bank. In 1998, India had a GNP of $427.4 billion and China's was $923.56 billion. The three largest car companies, GM, DaimlerChrysler, and Ford, had combined 1999 revenues over $460.3 billion. India (above) is the 11th largest economy.

[25] Based on sales revenues, the 1999 *Global 500* lists Motorola, with $29.398 billion in revenue, as the 100th largest company. Based on figures from the World Bank, during the previous year, only 59 countries had GNPs exceeding this amount. The 60th largest economy, Vietnam, had a GNP of $26.535 billion. Well over half the countries in the world have GNPs less than $10 billion.

technostructure promotes greater prestige, power, and higher salaries. It allows for individual advancement which does not have to come at the expense of someone else within the technostructure. Nothing better suggests the primacy of growth as a goal," argues Galbraith, "than the vehemence with which the sacrifice of growth to profit would be condemned as an unsound business practice" (1967, 161).

Directed Articulation: The Usurpation of Consumer Sovereignty

Not only has the coordinating logic of profit maximization been lost under corporate capitalism, but consumer sovereignty has also been crushed. Unlike a loaf of bread, for a new line of automobiles, a new drug, a new software application, or even a new ready-to-eat meal or a toiletry that will be used by millions, the gestation period for bringing the new good to market is so long and so expensive that the good's failure cannot be risked. In keeping with the technostructure's primary goal of minimizing loss, the uncertainty and caprice of the market must be mitigated. This gave rise to the revised sequence. Instead of entrepreneurs responding to the dictates of consumer demand within the confines of competitive markets, "the producing firm reaches forward to control its markets and on beyond to manage the market behavior and shape the social attitudes of those whom it, ostensibly, serves" (Galbraith 1967, 195). As we saw before, consumers must buy what is produced. The conventional belief that firms must produce what consumers want neither carries the same macroeconomic urgency nor conforms to the economic power and imperatives of the technostructure.

In 1998, the US's 100 biggest advertisers collectively spent over $64.5 billion on advertising. In that same year, the federal government spent less than half of that on education. Fifteen companies spent more than a billion dollars each on advertising; 194

companies each spent $100 million or more on advertising. Total US expenditure on advertising was estimated to be over $201.5 billion—more than the entire national output of over 90% of the countries in the world.[26] Apparently, reminding consumers of their insatiable desire for commodities is a tough business. McDonalds, for example, had to spend a dollar on advertising for every $4.88 they made in sales. Perhaps if they continue to spend over a billion dollars a year on advertising, Americans everywhere will learn about this inconspicuous hamburger stand. Reminding people that beauty really does come in a jar is even more difficult than Mcpeddling. Revlon had to spend a dollar for every $4.17 in revenue, and L'Oreal had to spend one for every $3.77 in sales.[27]

High Intensity Market

The affluence of consumers and power of corporations helped create what William Leiss (1988) calls the high-intensity market setting (HIMS). An HIMS "is simply a market economy in which there is a very large number of commodities available to large numbers of people, and in which many commodities are the result of highly complex industrial production processes involving sophisticated scientific and technological knowledge" (Leiss 1988, 7). In such a society, individuals "are encouraged to orient their needs towards the kind of satisfactions that are embodied in the expanding array of commodities" (Leiss 1988, 14). So much so, in fact, that individuals must learn "to identify states of feeling

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[26] Advertising figures come from statistics collected by the trade journal *Advertising Age* and made available at their website AdAge.com. In 1998, the federal government spent roughly 16.6 billion on elementary, secondary, and vocational education and another 12.1 billion on higher education. According to figures from The World Bank, only 21 countries had 1998 GNPs larger than $201 billion. Turkey was the 22nd largest economy with a GNP of $200.5 billion followed by Denmark with $175.1 billion. US advertising grew to $215.3 billion in 1999.

[27] Sales and advertising expenditures are for the US only. Again the data is from *Advertising Age*.

systematically with appropriate types of commodities" (Leiss 1988, 19). Leiss argues that under the HIMS, the complex needs of individuals are broken down into progressively smaller bits—each associated with a commodity. The need for the acceptance of others is fragmented into the need for nice hair, nice teeth, nice abs, and nice clothes. These, in turn demand the right shampoo, toothpaste, exercise equipment, and wardrobe. The need for nice hair can be further splintered into the right cut, right color, right grooming, right accessories—each associated with one or more commodities.

The thing about commodities, though, is old ones are continually being replaced by new ones. Our needs, our lives themselves, have to be continually reinterpreted against an expanding and complex array of commodities. New commodities "simultaneously promise the satisfaction of wants and promote a feeling of dissatisfaction with regard to the previously existing array" (Leiss 1988, 27). Leiss shows how this leaning towards commodities perpetuates dissatisfaction and scarcity:

> Commodities are by definition things that are relatively scarce. Thus when the sphere of the satisfaction of needs becomes more and more closely identified with the sphere of available commodities, the potential range of the experience of scarcity for individuals will increase in proportion to the number of commodities. At every moment the assortment of goods is, then, simultaneously the assortment of socially induced sensations of scarcity. This kind of society is beset with a permanent contradiction between expanding wealth on the social level and intensified experiences of scarcity on the individual level (1988, 32).

This commodity bent is not limited solely to consumers facing the challenges of a HIMS. The bias creeps into economic theory as well. In economics, we find the hedonistic consumption assumption and the MIB (more is better) assumption. These assumptions refer to the arguments of the consumption function not to the utility itself. That is, the comparatively reasonable assumption that people want more happiness starts to be blurred

with the less reasonable assumption that people want more things—typically some mix of commodities and leisure. Surely, such assertions are just convenient ways of articulating a model that can be much more robust. We could want more peace, love, beauty, or understanding. A utility function does not have to include commodities at all. However, a theory of utility maximization subject to a budget constraint does have a certain symmetry with a hedonistic consumption assumption. It seems unlikely that a theory of utility based on Schumacher's Buddhist economics, which seeks "the maximum of well-being with the minimum of consumption," (1973, 61) would have evolved in the same way by placing such emphasis on income and the quantity of goods. Constrained optimization is flexible enough to accommodate Buddhist economics, but that is not the way it is introduced and taught. At the very least, neoclassical models do little to correct the commodity bias of commercial society. In trying to appeal to intuition, economic pedagogy draws on, rather than contradicts, the biases of CSA. It is precisely a bias in articulation that is the focus of our concern.

Globalization

Capitalism and globalization have taken a co-evolutionary path. Early and recent colonization provided raw materials, markets, labor, and wealth that accommodated the creation, growth, and expansion of capitalism. However, early globalization was driven by the mercantilist and imperial agendas of nations. In recent decades, globalization has been increasingly shaped by the corporation. Such multi-national corporations are no longer bound to an individual country. Indeed, their global reach is substantially driven by efforts to seek locales with favorably low taxes, wages, environmental regulations, and worker

safeguards. Corporations with multinational strategic horizons can sidestep such measures enacted to promote and protect local and national welfare. This absence of citizenship gives firms the flexibility to avoid having to internalize the costs of environmental and social disruption brought about in the production of their commodities. David Korten (1995, 74-80) describes this new world, where monopolies are favored over competition, costs are not internalized, and capital is not locally or nationally rooted, as a betrayal of Adam Smith and David Ricardo. That is, it is a betrayal of the logic and philosophic justification of free market capitalism. Korten (1995) argues corporate libertarianism has replaced classical liberalism as the new market ideology. Corporate libertarianism uses the vestments of liberalism to mask the concentration of power, the withdrawal from market forces, and the absence of citizenship that characterize much modern commerce.

One of the major factors shaping globalization and making corporate libertarianism more commercially urgent is the explosion in technology. Satellites, cell phones, fiber optics, fax machines, microprocessors, the Internet, and a host of other technologies have, among other things, made interpersonal and international communication vastly easier and less expensive. In the words of Thomas Friedman, "If the first era of globalization shrank the world from a size 'large' to a size 'medium,' this era of globalization is shrinking the world from a size 'medium' to a size 'small'" (1999, xvi). In addition to linking and shrinking, technology is accelerating the world. Moore's law, which asserts that computing power of microprocessors will double every year-and-a-half or two, illustrates this fact. Yesterday's miracle gadget is quickly passe or obsolete. Applications that are impossible today can be expected soon enough. This has shortened the product life cycle of many of the same goods, like computers and cell phones, that are reshaping the economy. Products

have to be brought to market, fixed costs have to be covered, and profits made before a smaller, faster, more feature-laden substitute makes that good obsolete.

Creating Globalization—Institutions Built to Build Commerce

Importantly, the rise of globalization in recent years is the byproduct of an enormous amount of time, energy, financial commitment, and policy changes put in place over many decades. It is not, as it is often mystically characterized as, the spontaneous and unavoidable consequence of modernization. Much of this work had its start in 1944 at a conference in Bretton Woods, New Hampshire. The Bretton Woods institutions of the World Bank, the International Monetary Fund (IMF), and the General Agreement on Tariffs and Trade (GATT), along with the World Trade Organization, have worked tirelessly to expand the realm of global commerce. From helping European reconstruction after WWII, the World Bank's attention quickly turned towards international development. Korten argues:

> The Bank's claim that it simply responds to the needs and requests of borrowing countries is as false as the claim by corporate libertarians that the market simply responds to consumer demand. The Bank did what the big retailers did in the 1800s when faced with a frugal culture that failed to produce sufficient customers. It set about to reshape values and institutions in ways that would crate customers for its product (1995, 162).

Korten goes on to describe a process whereby more and more loans were extended to developing countries. As these countries' debt became increasingly large and unserviceable, the Bank was able to force structural adjustments, generally intended to promote market orientation, upon the countries. "To attract foreign investors, governments have suppressed union organizing to hold down wages, benefits, and labor standards. They have given special tax breaks and subsidies to foreign corporations and cut corners on

environmental regulations" (1995, 165). At the same time low-wage export industries were favored at the expense of traditional economies that existed outside the pecuniary sphere. No matter how useful, stable, sustainable, or culturally important, informal production can simply not help repay monetary debt. "To every need and crisis, money was the answer...At each step of the way, the social fabric was weakened and dependence on the money economy, especially the *foreign* money economy was strengthened" (1995, 253 his emphasis). While the growth of the monetary sphere was extraordinarily useful for corporations, commercial progress does not necessarily translate into sustainable improvements for the poor of these countries. "Rather than increasing their self-reliance, the world's low-income countries, under the guidance of the World Bank and the IMF, continue to mortgage more of their futures to the international system each year" (165).

The Effect on Commercial Social Articulation

Modern capitalism has served largely to intensify, rather than mitigate, the scarcity bias of CSA. Exclusion, dynamism, and individualism are as necessary to modern capitalist production as they were previously. The rise of directed articulation and the strategic creation of scarcity are crucial changes that created even more imbalance in the direction of acquisitiveness, materialism, and commoditization. Additionally, the traditional elements of CSA contained within our habits of thought shade perceptions of the new economic order in ways favorable to business. A pretext of individualism, for example, is a useful distraction from the bland and impersonal nature of mass production. Likewise, while corporations have systematically tried to protect themselves from competition, the myth of competition has grown in importance as it shrouds the exercise of power.

We might reasonably identify a new bias, *homogenization*, to those elements of CSA that are fundamental to capitalist production. This homogenization is oddly aligned with a new and uncharacteristic twist attached to individualism. Mass production, argues Ewen, required the creation of the "mass individual" (1976, 42). Such individualism eschews connotations of independence and idiosyncrasy. Indeed, even regional and ethnic traits were too narrow to readily accommodate mass production. Instead, they were viewed as barriers to be overcome in the homogenization of American culture (Ewen 1976, 41-59). This mass assault on culture was, of course, dressed in patriotic and democratic garb and cast as "civilizing." If America was founded on individualism, then Generica—with its strip malls, off ramps, and subdivisions that are indistinguishable from one city to the next—was built on mass individualism. Mass individualism was constructed for commercial purposes. Nothing better illustrates the amazing extent of commoditized commercial social articulation than our the expression of *individual* distinctiveness via *mass*-produce commodities. The yuppie in his luxury sedan, the rebellious youth in his baggy pants, the middle-aged doctor on his Harley Davidson, the suburban couple who rarely cook but still own a thousand dollars' worth of pots and pans, believe that their commodity portfolio is an expression of their individual personalities. Cliches be damned, and never mind that the goods, and the demand for these goods, were mass produced.

The rise of directed articulation promotes scarcity in several ways. First, there is the direct promotion of dissatisfaction. "Advertising helps to keep the masses dissatisfied with their mode of life, discontented with *ugly things* around them," wrote an advertising trade journal in 1930, "Satisfied customers are not as profitable as discontented ones" (quoted in Ewen 1976, 39). More tacitly, the logic of a variety of commercial phenomena such as

fashion and planned obsolescence is to ensure that consumers will eventually grow dissatisfied with their current possessions, the sooner the better for business. It is not mere coincidence that "new and improved" is the familiar call of the adman. There is nothing unusual or covert about these practices. It is an acceptable way of doing business and boosting profits. Fashion is ever-changing but shoddiness can remain chic. An ordinary pair of jeans is relatively inexpensive and durable. If consumers are convinced that jeans that are bleached and worn are fashionable, then this inferior product can be sold at a premium with the extra benefit that they will have to be replaced more often. Hundreds of times daily, we receive suggestions that what we have is insufficient, outdated, inadequate and inferior.

This well organized campaign of discontent employs thousands, costs billions, and encroaches into nearly every aspect of our daily lives. Our phones are instruments for our own harassment. Mailboxes serve primarily as receptacles for the $41.4 billion spent on direct mailings—mainly junk that we don't want but are forced to sort through before sending it to the landfill. There is no place safe from advertising. It is found along otherwise scenic drives, at gas pumps, above urinals, inside elevators, and even in schools and churches. The astonishing thing about our willingness to embrace this deliberately disquieting clutter is the preposterous and illogical belief that the 1/5 of a trillion dollars spent on advertising somehow makes life more affordable. Parents fail to ask who will pay for the soft-drinks, and the monopoly premiums on those soft-drinks, that will pay for the advertising that bought a new bus, or media system, or basketball court for their kids' school. Society believes in the pecuniary rationality of business, but fails to recognize that every billion dollars in advertising has to be made up for by at least a billion dollar increase

in sales. If consumers could not be convinced to pay higher prices and buy more things, it would not pay for business to advertise.

Assisted articulation also promotes scarcity because it is nearly always promoting commodities which, as already discussed, are by their nature the progenitors of scarcity. Public transportation can be a quick, efficient way of commuting that can be enjoyed by many and which does not readily promote invidious competition. Yet, why share transportation when everyone can show up in his or her own car, each one bigger and more expensive than the last? Additionally, the expanded role of commodities is made possible by the withering away of the non-commercial sphere. Even the ads themselves suggest subtly substituting public goods like wilderness, serenity, beauty, and silence with a private commodity such as a four-wheel drive SUV or a luxury sedan. If you can't make it to the mountains, at least sit in a car that makes you feel like you could. "What we are experiencing", argues Korten, "might best be described as a case of money colonizing life." "To accept this absurd distortion of human institutions and purpose," he continues, "should be considered nothing less than an act of collective, suicidal insanity" (1995, 247). The next chapters, will examine how sharp imbalances in social articulation create opportunities for shifting costs out of the commercial sector to the detriment of families, communities, and the environment.

Under modern globalization, the economic mode of production is even more dependent on the standard elements of CSA. Consequently, the biases of CSA and their logic of scarcity have grown increasingly entrenched and widespread. "Present-day corporations have no reservations," explains Korten, "about reshaping the values of whole societies to create a homogenized culture of indulgence conducive to spurring consumption

expenditures and advancing corporate political interests. . . . whole industries have emerged to help corporations create insatiable desires for the things they sell and cultivate political values aligned with the corporate interest" (Korten 1995, 150). As before, these biases are encouraged to promote industrial production, not social welfare more broadly defined. With the expanding power and scope of the market this distinction is becoming more stark. "We have become captives of the tyranny of a rogue system that is functioning beyond human direction. Driven by its own imperatives, that system has gained control over many of the most important aspects of our lives to demand that we give ourselves over to its purpose—the making of money" (Korten 1995,22). Thomas Friedman, who is more optimistic about globalization than is Korten, nevertheless came to the conclusion that globalization had "unleashed the forest-crushing forces of development and Disney-round-the-clock homogenization, which, if left unchecked, had the potential to destroy the environment and uproot cultures, at a pace never seen before in human history" (Friedman 1999, 18).

These market dictates are not simply abstractions recognized only by academics and journalist. Friedman describes a farmer, Gary Wagner, who recognized growth was the key to survival. Wagner now uses computer, satellite, and GPS technology to improve productivity by precision farming so that "he can concentrate on the key strategy, which is making his farm bigger so it will be the one that eats the others and is not eaten itself" (Friedman 1999, 74). He also points to Jerry Portnoy whose lighting company created its own computerized inventory system because Portnoy, in his own words, recognized "in this winner-take-all environment, you have to be bigger, faster, smarter than your competition" (79). Friedman then uses examples, from all across the world to illustrate what he calls "the Golden Straightjacket" (83-92). The Golden Straight jacket, or what Korten calls corporate

libertarianism, is the commercial-oriented political ideology spreading across the globe in varying shades of gray. It is spreading, not so much because it is universally liked but because the blinders of CSA are so powerful that there is a widespread and unfortunate belief that there is no alternative. "Today," says Friedman, "there is only free-market vanilla and North Korea" (86).

Two points must be made clear in dispelling this mystic, market determinism. First, the forces sweeping us along are not unique to the 21st century. Rather, they are the same forces identified by Marx in the 19th century. They are the same forces that gave shape to CSA originally. Growth, for example, does not become an imperative simply because a farmer, manufacturer, or software oligigopolist now faces global competition. Instead, as we saw in the previous chapter, it arises because capital is a social relationship of exclusion and domination—one that cannot be passive. "The sheer necessity for self preservation forces capitalists to seek to expand" (Heilbroner 1980, 68).

Second, as mentioned above, globalization is not in the least bit spontaneous. Rather, it is the byproduct of long-running and ongoing efforts by bureaucrats, elected officials, and business leaders. Often, globalization is seen solely as a byproduct of modernization and electronic commerce. We are like techno-savages who are bewildered by our own gadgetry and quick to ascribe a near-divine teleology to forces too complex for our comprehension. It is easy and convenient to blame technology instead of policy makers. It is as if the mantra "you can't stop progress" somehow absolves society from the responsibility of considering alternatives for how it is shaping the planet and its own future.

The point is, this is not first time society has been re-structured to accommodate fast-paced production. This is instead a continuation of what Polanyi (1944) described for the

industrial revolution as the "Great Transformation." It is the subjugation of humanity and nature, of life itself, to the whims of the market because the market is the only economic system nimble enough to keep up with the needs of technology and mechanized production. While that much is true, there is no clear reason why the need of humanity should not trump that of machine. Exclusion, growth, individualism, acquisitiveness, competitiveness, materialism, commodification and scarcity are expedient for the world of commerce and machines. However, until these values are proven to be coterminous with all that promotes human welfare, we would do well to correct these biases rather than surrender to them.

As an economic problem, scarcity evolved as economic imperatives shifted from provisioning humanity to accommodating mechanized production and constraints shifted from insufficient production to insufficient consumption. Our conception of scarcity masked this change. Our personal desire for various commodities seem sufficient and natural enough that there seems no need to look further thereby learning that our demand for Ford, Crest, and GE also reflect the demands of mass production. Social articulation not only creates certain biases but it prevents us from wondering why a desire for happiness should be seen as a desire for more commodities.

Chapter 5: Economic Ecotones

So far, this book surveyed both the question of scarcity in the history of economic thought and our prevailing pattern of social articulation. Where ideally we would have found Mill's due balance, we have found none. Scarcity has been transformed from an ultimate constraint on economic progress to a necessary ingredient for economic growth and prosperity. The failure of Malthus and Ricardo's predictions did not ease our concern about scarcity. Insufficiency is a stronger theme in modern than in classical economics. Similarly, spiraling production seems as self-obviously necessary for improving social welfare now as it was in the mean world of a Dickens novel. At the same time, our social articulation is extremely powerful, highly productive, and well suited for the needs of industrial capitalism. Yet, its very power and focus prevent balance by accommodating certain habits, thoughts, behaviors, and policies much more readily than others. Like Mill, our society has not yet adequately cultivated, for example, its passive susceptibilities.

So what are we to make of these imbalances? Are the discontinuities between modern economic reality and past-binding economic theories or between readily articulated and poorly articulated values of any consequence? Concepts borrowed from ecology will help address these questions. The short answer is that sharp discontinuities create unique opportunities. The effects stemming from these opportunities can be either good or bad and are often good for some and bad for others. In ecology, the opportunities created by sharp

discontinuities in habitat can attract an abundance of life and activity. While important and universal, this phenomenon is not inherently good or bad but can be productive or destructive depending on circumstance. Similarly, social and economic discontinuities must be individually evaluated. Often, they are beneficial, but they can be socially disruptive when they allow individuals or institutions to shirk responsibilities and ignore costs. This chapter, somewhat of a digression, is meant to posit an analytical tool that can then be applied to investigate the discontinuities already discussed.

Ecotones and edge effects, two concepts borrowed from ecology, are useful tools for analyzing a wide range of economic phenomena. Ecotones are the conjunctures between two or more systems. Wetlands, tree lines, and the meeting of savanna and desert are all examples of ecotones. Ecotones, sometimes called edges, frequently support comparatively large amounts of activity and biomass—a phenomenon known as edge effect. Part of this edge effect is accounted for by the simple fact that the ecotone supports many of the species from each of the overlapping communities. In addition, there are species "which are characteristic of and often restricted to the ecotone" (Odum 1971, 157). This chapter examines the economic analog of ecological ecotones and demonstrates the usefulness of the concept in explaining the locus of economic activity as well as the causes and consequences of this activity.

Forest edges are a common example of ecotones. They occur naturally, and their boundaries can often be traced back to recent fires or even ancient glacial activity. They can also be an artifact of human activity. When people plant a stand of tress where they are otherwise scarce or clear forest to make way for new construction, they create ecotones. Often, these edges contain many species. Some dwell in the forest, others in the grassland,

and still others benefit from both the sunny field and the sheltering cover of the forest. Deer and other game live in abundance along many ecotones of this kind. An observant visitor to such an area might notice, over many years, that the edge was creeping—changing the boundaries of the forest and grassland and affecting their relative sizes. She may also notice that the rain of seeds from plants abundant along the edge affects the composition of flora in these colliding habitats. On walks through the forest, she may start to miss songbirds and realize that the decline in their numbers is due to nest predators, like the blue jay, that thrive along ecotones (Wilcove et al. 1986, 249).

The above sketch of an ecological ecotone illustrates why the concept is so important. First, edge-specific phenomena make the ecotone significant in itself. The abundance of blue jays or deer is not so much explained by the presence of forest or grasslands as it is by the existence of the edge between these two habitats. Such edge effects exist because the edge creates unique opportunities for taking advantage of multiple systems while escaping the dangers or constraints of each. The edge, in a sense, draws life and activity to it. Birds, for example, might find the edge attractive so they may feed in the open field and nest in the trees. Second, the edge can affect the composition of the principal communities. Edge dwellers can affect the specie populations found in the interiors of both adjoining systems. The reduction of songbirds by nest predators is a common example. Finally, the edge can affect the relative sizes of adjoining communities. The various species and microclimatic conditions found in the ecotone may favor one system, allowing it to encroach upon the other.

Ecotones also exist in the economic sphere—wherever there is a collision between systems studied by economists. These ecotones are an important locus of economic activity

because they create unique opportunities. Studying the interstices between systems is important to understanding where and why such edge-specific phenomena take place. The collision between households and markets, for example, explains some phenomena better than does either system by itself. Likewise, the conjunctures between market power and competition or private property and common property help spur economic activity that is best understood by studying the edge between systems rather than the systems proper. Additionally, ecotones are important to understanding intersystem dynamics. If one wants to understand the long-run viability of a system, they must examine the interactions between that system and others. Focusing on competitive markets, for example, is insufficient for understanding the viability of the competitive sector. One must also examine the collision between competition and market power. The following is a survey of a variety of economic ecotones; it is meant to better illustrate the usefulness of the concept.

Historical Ecotones—A Locus of Economic Activity

Ecotones frequently cradle economic activity. Sometimes these ecotones are defined in principally ecological and geographical terms; other times they are defined in principally cultural and institutional terms. In the former cases, these economic ecotones are precisely the ones studied by ecologists; in the later cases, their composition, if not their consequence, exist outside the purview of ecology.

Humans, like other occupants of the upper levels of the trophic pyramid, are attracted to ecotones by an abundant and diverse food supply. "Throughout their history, human populations have actively positioned their communities to take advantage of animal and plant populations on either side of and within ecotones" (Crumley 1993, 379). Consider, for example, the Native Americans indigenous to the southeastern part of what is

now the United States. Traditionally, many of these peoples lived along the coastal plain, concentrated especially near the coastline—itself an ecotone between land and sea.

> The second important region for the Southeastern Indians was the piedmont, a band of hilly uplands between the Appalachian Mountains on the one side and the coastal plain on the other. The piedmont is separated from the coastal plain by the 'fall line,' an imaginary line drawn through the shoals and rapids of the rivers as they fall abruptly from the uplands to the flat coastal plain. The territory lying immediately to either side of the fall line was an important region in itself. Some of the most populous societies in the prehistoric Southeast lay along this line, the reason being that from this vantage point the Indians could exploit the natural resources of the coastal plain, the piedmont, and the fall line itself. The best freshwater fishing in the Southeast was at the fall line, where in certain seasons fish could be taken in vast numbers as they swam upstream to spawn (Hudson 1976, 19).

The fall line illustrates the way ecotones create unique opportunities for taking advantage of the adjoining regions as well as the idiosyncratic characteristics of the ecotone itself. In a very real sense, these Native Americans enjoyed the best of three worlds, while avoiding many of the constraints of each.

Ecotones also provide good locations for centers of trade. The most obvious example is the seaport. Ecotones are advantageous trade locations because they allow access to different types of food[28], other goods, and even different cultures. In the case of seaports, the meeting of land and sea combines accessible living space and easy transportation. Polanyi, while never mentioning the word "ecotone," was clearly aware of their anthropological significance with regard to trade:

> Thus we find the port of trade as a universal institution of overseas trade preceding the establishment of international markets. It was, as a rule, situated on coastal or riverain sites, where inlets and extensive lagoons eased

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[28] Mumford (1956, 384), for example, argues the rich and varied diets of those who lived along shorelines not only helps explain urban growth but also may have "contributed to the vital energy of city dwellers as contrasted with the more sluggish ways of the hinterlands and perhaps may also have partly offset the bad effects of close quarters in spreading communicable diseases."

> transportation by land. A related institution, however, might also be found far inland, on the border of two ecological regions, such as a highland and a plain, but particularly on the border of the desert, that *alter ego* of the sea (Polanyi 1963 in Dalton 1968, 239).

The *port of trade* concept was introduced[29] by the Interdisciplinary Project at Columbia University in the book *Trade and Market in the Early Empires*; Polanyi is only one of the contributing authors who discuss it (263). Anne C. Chapman likewise emphasizes the port need not be on the sea. "Transshipments naturally develop from the earliest times on the borders of ecological regions, such as highland and plain, desert and jungle, forest and savannah" (in Polanyi 1957, 116). Chapman goes on to explain the role of such enclaves in Aztec-Maya trade. Francisco Benet mentions the importance of ecological borders in the location of a class of Berber *suqs* that served as large regional markets (in Polanyi 1957, 197). Others examine ports of trade on the Guinea coast and in the ancient eastern Mediterranean.

Clearly, ecological ecotones have, since the earliest times, shaped human society, and they still help shape local culture and politics (See, for example, Crumley 1993, 379). Indeed, the connection between human activity and ecotones is so strong that the historical and anthropological record has been used as a tool for tracking ecotonal shifts that resulted from long-term swings in global temperatures (Crumley 1993). However, the economy is shaped by more than ecological and physiographical boundaries. Institutional boundaries, in particular, are very important in shaping modern economies. These institutional ecotones also create unique opportunities and allow people to take simultaneous advantage of multiple systems.

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[29] The coining of this term is briefly mentioned on page 115.

Non-Ecological Ecotones: The Geography of Human Institutions

The ecologist Paul Risser points out ecotones exist in a wide variety of scales, and the ecotonal scale "can be defined by the question being asked or the problem being addressed" (1995, 319). The flexibility and generality of the ecotone concept is likewise captured in a definition of ecotones offered by a 1987 working group. They defined an ecotone as "a zone of transition between adjacent ecological systems, having a set of characteristics uniquely defined by space and time scales and by the strength of the interactions between adjacent ecological systems" (Cited in Gosz 1993, 369). Significantly, the ecotone concept cannot be defined in terms of scale or by specific constraints or interactions. Soil chemistry and intraspecies interactions might shape a small ecotone, while the continental-scale ecotones between biomes are shaped by climate and topography (Gosz 1993, 372). The concept of ecotones is robust enough to be meaningfully applied to economic, as well as ecological, systems. Different ecotones are shaped by different factors. While soil chemistry, climate, and species interactions are critical ecological constraints, the economy is substantially shaped by other factors. When the ranges of these institutions meet, they too create ecotones. This is not simply equivocation. The key trait of any ecotone is the unique opportunities for taking simultaneous advantage of more than one system.

The most readily identifiable institutional ecotones fall into what might be considered an intermediate category because they lie along readily identifiable geographic boundaries. One commonly sees businesses that sell liquor, fireworks, or adult entertainment clustered along the outer boundaries of towns, counties, and states. Businesses and households alike commonly choose locations that allow them to take

advantage of a community's amenities and population base while avoiding its taxes, ordinances and other dis-amenities. While these ecotones are easily identifiable with boundaries on a map, the key discontinuity which gives rise to their existence is institutional not spatial. A few feet in either direction would make no difference except for the abrupt change in laws.

Other examples of non-ecological ecotones that are nevertheless geographically discernable are the ports of trade found along the intersection of two roads. Certainly, intersections are well removed from the ecological concept of ecotones. Nevertheless, junctions do allow individuals to take simultaneous advantage of multiple, strongly interacting, systems—transportation systems that bring together people and goods from the four corners of the map. Simple systems, roads well illustrate the point at hand. For a trader, a major constraint of a north-south road is that it does not readily accommodate provisioning from western or eastern sources. Crossroads solve these types of problems simply, completely, and efficiently. Benet mentions crossroads as another common location for *suqs*, and Mumford argues "The Sumerian ideogram for market, a Y, would indicate perhaps that the idea of the market as a juncture of traffic routes was already recognized" (1961, 72). Many institutional discontinuities, because they lack an identifiable geographic correlate, are not so easily apprehended. These ecotones are nevertheless important because the unique opportunities they provide attract a good deal of economic activity.

As we move from timberlines and shorelines to city limits, crossroads, and beyond, continued discussion of ecotones may appear to be pushing things a bit. This would be true if our focus was not on humanity. Human populations find constraints and opportunities in

a world that is only partly defined in biophysical terms. Further consideration of ports of trade illustrates this point.

Early market locations took advantage of interstices that were both physical and institutional. Early ports of trade were often located along ecological ecotones, but functionally, key discontinuities were also institutional. Specifically, ports of trade were often located either along the outskirts of a communal boundary or in the interstices between powerful states. In the case of Berber markets, Benet argues "Psychologically as well as physically market places stand on the 'fringes' of the in-groups" (in Polanyi 1957, 198). Villages and markets are "completely dissociated in the physical sense." "The *suq*," he continues, "stands locationally apart from and in contrast to the village." Market transactions, in both a physical and a social sense, lie beyond the realm of appropriate in-group conduct. The ecotone, however, in typical fashion, allows individuals to take advantage of two distinct systems. "The physical separation of the village and market makes possible the co-existence of two well-developed forms of integration in the same society—market exchange and in-group reciprocity" (in Polanyi 1957, 199).

Anne Chapman wrote about the importance of the location of ports of trade used by Aztecs and Maya. These were usually found outside the territories of the two great peoples:

> Ports of trade usually developed in politically weak spots, such as small kingdoms near the coast, or chieftains' confederacies, since under archaic conditions, strangers shunned territories that were incorporated in military empires. To hinterland empires the "ports" served as a "bread basket," that is, as a source of supply. Even powerful rulers were wary of laying their hands on the "port," lest foreign traders and strangers shy off and trade suddenly dry up (in Polanyi 1957, 116).

Chapman argues that typically such areas were relatively neutral and autonomous. Moreover, these ports of trade, "whether enclaves or buffer states...served as intermediaries

between militarily powerful metropolitan units" and are crucial to explaining the high level of trade between Aztec and Maya (in Polanyi 1957, 116). Similarly, in discussing ports of trade in the ancient eastern Mediterranean, Robert Revere argues "Its main function was to guarantee neutrality" (in Polanyi 1957, 52). Traders needed to know that their goods could be safely exchanged and not taken by force. "The presence of a strong military power on the spot would unfailingly frighten them away" (in Polanyi 1957, 52).

Typically then, early ports of trade were found in ecotones that were defined in both physical and institutional terms. The quintessence of these ports of trade was that they were situated to take advantage of multiple systems, be they land and water, desert and highland, reciprocity and exchange, Aztec and Maya, or Hittite and Egyptian. Alexandria, a city described by Revere as "the port of trade par excellence" (in Polanyi 1957, 61), perhaps best illustrates this point. A coastal city, it was situated at "the point of entry to the west" for commerce coming from the orient via the Red Sea:

> Neutrality was its *raison d'être*. Although situated on Egyptian soil and erected under Greek a government, neither the Egyptians, nor even the Greeks themselves were to wield power in it. ... Its neutrality was guaranteed by settling there Jews and Egyptians in large numbers, so as to reduce the preponderance of the Greeks themselves. (in Polanyi 1957, 61).

Land and sea, East and West, Greek and Egyptian, were all important ecotonal conjunctures that shaped Alexandria.

Institutional and ecological ecotones have been, and still are, important factors in shaping economic geography. This is an important insight because there is "almost no spatial analysis in mainstream economics" (Krugman 1988, 33). On this matter, Paul Krugman points to Mark Blaug's opus on the history of economic thought, wherein Blaug "describes the neglect of spatial issues as a 'major puzzle'" (Krugman 1988, 34). Krugman

argues the main problem is that models for economic geography require increasing returns to scale—an anathema to the competitive bias of neoclassical economics. According to Krugman, "to talk even halfway sensibly about economic geography it is necessary to invoke the role of increasing returns in some form" (1988, 36). When it comes to spatial issues, he argues, "you really *cannot get started at all* without finding a way to deal with scale economies and oligopolistic firms" (1988, 35, emphasis added). Krugman is on firm ground when he argues spatial issues have been neglected because neoclassical economists eschew topics that would involve modeling economies of scale. However, while economies of scale are important, it is not true that they need be the alpha and omega of economic geography[30]. The advantages of ecotones need not involve returns to scale. Rather, such economies can be local, natural, and arise from conjunctures and discontinuities instead of size. They can shape neighborhoods, cities, regions, and trade patterns.

Institutional Ecotones: Systemic Growth & Diminution

As we have seen, ecotones permit one to avoid some of the costs or constraints of a particular system. This creates a problem in market-oriented economic systems that is not a concern in ecology. For commercial systems demand costs be weighed against possible benefits and not simply be shirked. Especially under capitalism, the rationality of the system suffers when costs are not eliminated but rather sidestepped or shifted onto others. Cost shifting along economic ecotones is a common phenomena. Business, for example, is eager to shift the burden of factor costs onto consumers by charging higher prices.

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[30] Mumford, *e.g.*, championed regional planning that would take advantage of natural economies as opposed to economies of scale (see Mark Luccarelli, *Lewis Mumford and the Ecological Region*, p. 3).

However, the relative elasticities of supply and demand are an inherent constraint on such activity. Nevertheless, shifting costs within the market domain is only one option. Shifting costs out of the market and onto third parties represents an attractive possibility. What is more, in a disembedded economy there are no inherent constraints on such activity. The firm will continue to shift costs as long as it is permitted and as long as doing so is beneficial. For these reasons, part of the burden of factor-market competition is commonly shifted onto third parties competing in other domains.

Take, for example, a manufacturing firm. Such a firm faces, at least implicitly, a choice between polluting or investing in pollution-control capital. If it chooses to invest in pollution-control capital then it must compete against other firms for this resource. However, competition is irksome, and many will seek to avoid it. Why spend money competing in factor markets for pollution control capital if the competitive burden can be shifted onto those who would compete for health services? The burden of factor-market competition manifests itself as higher costs for the manufacturing firm. It is to the firm's advantage to shift costs. Sloughing the costs of competition and polluting instead accomplishes this. By polluting, the firm reduces its costs of direct competition in factor markets. Importantly, neither the costs nor the burden of competition has been eliminated. Rather, they have merely been shifted to another domain. These so-called external costs become most apparent when others face the burden of market competition. For example, effluents may increase the burden, in a pecuniary sense, of those who compete for bottled water. Toxic emissions, on the other hand, may increase the burden for those who compete for health care.

The conjuncture of systems creates special opportunities. The edge, one might say, provides the best of both worlds. The firm may reside in a system characterized by property rights and markets, but along the edge it is free to exploit the advantages of other domains. The institution of private property conveniently ignores the first law of thermodynamics. One may own a ton of coal, or a tank of gas for that matter, but claims of ownership are seldom heard for the post-combustion nitrous oxides, sulfur dioxide, or carbon monoxide. Matter still exists, only property has vanished. This is an important point; for pollution and other externalities are not caused simply by the lack of well-defined property rights. Rather, they arise from the collision between private property and common property.

The crux of the problem is the collision of private benefits (profits) and communal costs (pollution). We do not expect the firm to inflict damages upon itself or any other entity with readily defendable property rights. Cost shifting is beneficial to the firm only when costs are shifted *beyond* the realm of pecuniary accountability. Likewise, we would expect much less industrial pollution if corporate revenues, like the air and water, were a common-property resource. Alternatively, we would also expect less pollution if ownership persisted at all entropic levels thereby forcing responsible disposal of effluents and emissions. This is not to argue that we should eliminate private property. Rather, the purpose is to point out a stark bias in our habitual patterns of social articulation. It is now axiomatic that pollution, resource depletion and other environmental problems are caused by the lack of well-defined property rights. However, this is more cheerleading than science. Instead of focusing on the conflict between two institutional systems, economists simply argue the problem is the lack of their favored institution. By ignoring ecotonal conflict,

economists forego critical analysis of this hugely important issue. Instead, to borrow a phrase from Buffalo Springfield, "they mainly say 'hooray for our side.'"

Another important example of ecotones created by economic institutions is the edge between markets and the household. This ecotone offers another, though perhaps more subtle, example of cost shifting. Along this edge, we find work that is critical to the formal economy but which receives no pecuniary compensation. This edge effect is particularly interesting to those doing research in gender issues. In ecology, along the edge between forest and grassland we find deer, jays, and grackles. In economics, along the edge between households and the market, we find the institution of housewife.

Few deny that the work done by homemakers is valuable to households. What is not popularly appreciated is that this work, generally done by women, is critical to the functioning of the economy as well. In addition to the obvious task of rearing future generations of producers and consumers, there is the more subtle chore of accommodating material affluence. For example, Galbraith argued that as incomes rise beyond some threshold, affluence becomes more burdensome (1973, 29). Fine clothes must be cleaned and pressed, choice meals require toil in the supermarket and kitchen, and nice homes require perpetual cleaning. The market generates these commodities and the resulting complications are a cost of economic growth.

Market growth and ever-increasing consumption are facilitated when the costs of this growth can be shifted elsewhere. Specifically, there is an advantage to be had if some of this burden can be shifted out of the market's domain and into the domain of the household. Galbraith has shown Convenient Social Virtue allows much of this burden to be placed on housewives (1973, 29-37). Cooking, cleaning, and nurturing are rewarded not in

pecuniary terms through the market but rather with the inexpensive esteem of society. In short, the costs of commodity consumption are not all market costs registered in pecuniary terms. Housework often requires no pecuniary compensation. Instead, it is coordinated by customs and gender roles. By shifting some of the costs of growth onto the household domain, the market domain is better able to continue its expansion. "The servant role of women," Galbraith argues, "is critical for the expansion of consumption in the modern economy" (1973, 33).

Significantly, this institutional pattern is not driven so much by the existence of the market or the household as it is by the conjuncture of these two arenas. The so-called "house slave" is an edge dweller sanctioned by convention whose role in the economy is the accommodation of economic surplus. Importantly, this edge dweller is not a person but an institution. This particular institution fills a niche between the market and the household and allows commercial interests to take simultaneous advantage of both arenas. Specifically, they are able to reap pecuniary reward in the market while shifting part of the costs of this activity out of the market and into the home.

Similarly, caregiving is crucial to social and economic viability. However, much of this work has traditionally been done by women outside the formal sector of the economy (Folbre 2001). Since these women receive little or no pecuniary remuneration, these valuable services effectively serve as a subsidy for the commercial sphere. Folbre likens the situation to the imaginary, and cautionary world of CorporNation—whose citizen/employees are highly paid but who must be highly skilled, healthy, and childless; defying these rules would result in the loss of both citizenship and employment. "CorporNation takes advantage of the human capabilities of its citizens/workers without

paying for their production or maintenance when they become ill or old"(2001, 185). In the short run, this would make CorporNation exceptionally competitive in the global market place, until it was emulated by others. Collectively, of course, this strategy could not work in the long run because it depends on "exploiting a natural resource without replenishing it" (2001, 186). Free-riding can work for a few wishing to shirk responsibility; collectively, however, it is a disastrous strategy.

This type of ecotone, with its gender-biased consequences, is not limited to industrial economies. Indeed, as workforce participation by women has increased and a greater share of their time has been ascribed a pecuniary value, the differential advantages of this ecotone have diminished. Consequently, the share of housework done by women has slightly decreased as men and the commercial sector play larger roles. In developing countries, however, where the differential advantages between the formal and informal economies are more stark, gender imbalances in pay and work effort are likewise more askew. Studies have shown, for example, that in developing countries women, on average, work 13% more hours than do men. Two-thirds of this work is in unpaid activities. This is in contrast to the one-quarter of all the work done by men for which they receive no pay (UNDP 1995, 88-91). This is a good example of edge effect. Much of the work done by women, such as farming and child rearing, is critical to the health of the economy. Inasmuch as this work is unpaid or underpaid, there is a pecuniary incentive to keep this work outside the formal economy. Consequently, we have an edge effect—a superabundance of activity evidenced in the fact that those who receive no pecuniary compensation shoulder the largest workloads. In effect, much of the costs of the formal economy have been shifted onto the household. As long as there is pecuniary value to work

done by women and as long as they receive little or no pay for this work, it is reasonable to believe they will remain overworked.

Ecotones and the Dynamics of System Composition

Edge-specific activity does not complete the story of ecotones. The ecotones and the principal systems help shape each other. The rain of seeds from the edge, for example, can alter the composition of flora within the forest. Additionally, the edge need not be stationary—it can alter the relative size of one system or another. If shrubby plants along the edge facilitate the growth of pines then we expect the forest, over time, to encroach upon the grassland. To appreciate fully the significance of ecotones, one must examine how they affect the composition and relative dominance of adjoining systems.

Looking further at the previous pollution example will illustrate the effect ecotones have on the composition of neighboring economic arenas. Here, the unique opportunities found along the edge between well defined and poorly defined property rights attract an abundance of activity—namely cost shifting in the form of pollution. Yet, these edge effects are not neutral. In the market sector, certain businesses—like those providing health care or drinking water—will benefit from the edge effects. Other businesses, such as those providing recreational goods, stand to suffer. This is a very simple example, but it illustrates how economists might use the concept of ecotones to direct economic inquiry. First, they need to identify the margins created by the meeting of different institutional structures. Second, they should look for edge effects stimulated by the unique opportunities found along these margins. Third, economists should determine what impact these edge effects have on neighboring domains.

The role of edge effects on the rise and decline of different economic systems might best be illustrated in the examination of mass marketing. An analysis of advertising that was restricted to its effects within a particular market structure would miss its most important ramifications. For example, when oligopolists' advertising is studied, it is often viewed as a routine strategy whose most important implications are for the profits of the competing oligopolists. Marketing is thought to be only a means of competing for profits and consumers. Such an approach focuses on activity within one particular domain and ignores all the important edge effects.

However, by including edge effects in our analysis, we can readily see that Social Imbalance is a consequence of mass marketing more significant than variations in the profits of competing oligopolists (Galbraith 1984, 190-204). Moreover, marketing is recognizable, not simply as a means of competition, but as a way of shifting the burden of competition away from corporations. In fact, it was recognized as early as the 1920s that corporate advertising, even industry-wide advertising was too narrow to accommodate the needs of business (Ewen 1976, 53-54). What was needed, and what was created, was a consumer culture that would reliably and perpetually increase the magnitude and breadth of consumer spending.

A corporation competes for control. Competing against other major corporations for such control is burdensome. However, corporations are able to shirk some of this burden by seeking control elsewhere. Power is most effectively used against the powerless. Galbraith has shown that the effects of mass marketing stem from shifting the burden of competition from within the planning sector onto the competitive sector and certain public services. *Wants creation* is most effective precisely where we cease to find it. Producer sovereignty

is ineffective when it butts heads with the sovereignty of other producers. It is most effective and most damaging beyond the realm of big-scale production—where it enters the household and changes the consumption and labor-supply choices of individuals. It is powerful when it takes business away from the small independents; it is powerful when it diverts resources away from public services and toward its own ends. Producer sovereignty is most powerful not within the planning sector but along its edges—where this sector meets the public, competitive, and household spheres. It is only by looking at other domains and the boundaries between them that the primary significance of marketing within the planning sector becomes clear. Social Imbalance is a consequence of the edge effect of wants creation. As the predatory behavior of the edge-dwelling blue jay undermines songbird populations in the forest, so too does mass marketing lead to squalor in the public sector. In both cases, the dynamics along the edge affect the composition of adjoining systems. In particular, the marketing dynamic along the edge of the planning sector leads to the ascendancy of this sector.

The Creation of Ecotones: Another Source of Dynamism

In nature, a primary reason we find so much activity along the edge is that species can take advantage of the benefits of one habitat while avoiding its dangers or constraints. Grazing animals, for example, may seek a grassland's abundant food yet be reluctant to move too far from the forest's protective cover. In economics, there are similar advantages from playing the edge. Humans, though, are deliberately able to produce ecotones by creating disruptions in a system. Indeed, people have often exploited edge effect by creating both ecological and institutional ecotones.

Recently, human-created ecotones have made the news for favoring game species above over-all biodiversity. In particular, scientists discovered that many small plots of forested land will contain less diversity than the same acreage of forest contained in one large block. The reason for this is ecotones can favor certain species above others. In small patches of forest, species favored by ecotones overwhelm those common to the forest interior. The Forest Service's policy of aggressive road building and clear cutting has created an abundance of edge habitat (Mlot 1992, 1618). Such habitat is beneficial to deer, but deleterious to certain rare plants and other species. This has led a group of botanists to challenge the U.S Forest Service's land management. The botanists proposed an alternative plan for harvesting timber in the Chequamegon National Forest. This plan would have reduced fragmentation and edge effects while allowing for the same amount of logging. The plan, however, was opposed by a coalition of groups supporting logging, hunting, paper, and snowmobile interests (Mlot 1992, 1618-19).

The artificial rise in the number of deer is reminiscent of techniques used by Native Americans who, like modern hunters, benefited from an increased deer population. "They repeatedly burned off large portions of the forest to create grazing lands, artificially stimulating the number of deer"(Hudson 1976, 19). Fire was also used as a tool in hunting and agriculture. "As a consequence of all of this burning, the forest cover of the piedmont was broken by large expanses of grassland containing scattered giant oaks and large herds of deer" (Hudson 1976, 20). It is worth mentioning that the early examination of edge effect was in regard to its favorable impact on game populations (Leopold 1933). It was not until later that scientists started to worry about some of its deleterious consequences.

In addition to its historic parallels, the example is instructive because it illustrates both the ecological and the institutional concepts of artificial ecotones. The abundance of edge favors game over biodiversity. Managing for such effects is a good example of the economic opportunity commonly found along ecotones. In this case, disruptions to the forest benefits hunters and loggers while allowing them to ignore the costs. This ecotone is at once a collision between forest and road and between ecological imperatives and a particular set of human interests. Deliberately created ecotones are important because those who benefit from such disturbances may not have to consider the costs incurred by others. Hunters and loggers may benefit at the expense of botanists, birdwatchers, and the ecosystem. Veblen wrote at length about those who "have an interest in making the disturbances of the system large and frequent, since it is in the conjuncture of change that their gain emerges" (1904, 20). The abundance of edge persists for pecuniary reasons. Veblen was concerned with disruptions primarily in the industrial system. However, he recognized that the opportunity for pecuniary gain arose from differential advantages found along a variety of conjunctures. Moreover, Veblen's primary thesis, in this regard, was that the quest for pecuniary gain is often at odds with instrumental imperatives. Current Forest Service policy, for example, favors the vendibility of logging and hunting permits while its ecological and long-run soundness remains questionable.

Finally, the overabundance of logging on Forest Service land cannot be explained merely by market demand or by the existence of public lands. An explanation must be found by looking at the institutional ecotone—at the collision of the market and the public sectors. While there are many reasons for the over logging of national forests, the general reason is simply that edge effects create the opportunity to avoid the costs and constraints

associated with each of the relevant sectors. For example, the Forest Service's road-building activity does not have to satisfy the strict market criterion of profitability. The result is over 360,000 miles worth of roads that effectively create an enormous subsidy for the logging industry (Knize 1991, 107). Likewise, the harvesting activities of the timber companies are not restricted by the broader social and ecological concerns or the budgetary constraints faced by the Forest Service. It is not surprising, then, that suggestions for improving the situation call for either increasing the market accountability of the Forest Service or the legislative accountability of timber companies.

Conclusions

In economics as well as ecology, ecotones demonstrate that theories of parts are not sufficient. Often, phenomena must be explained in context of the peculiar dynamics and opportunities that arise when these systems collide. These ecotones are unique and distinct from the principal parts. As such, they require study in their own right. Problems such as cost shifting often arise from the collision of two domains rather than the existence of one domain or another. Accordingly, it becomes clear that arguments such as those claiming excess pollution exists because of the lack of well-defined property rights are only half true. The real problem is both the existence and the lack of property rights.

Ecotones are also important because the effects from these conjunctures feed back into the principal domains—altering them and helping to determine relative ascendancy. Hence, we might observe songbird-poor forests overrunning grasslands, or we may find an explosion in commodity production accompanied by public squalor. Ecotones further demand our attention because unique advantages along edges can create an abundance, even

an over abundance, of economic activity. As ecotones attract activity, so too must they attract our attention.

It is inconceivable that ecologists studying a lake would ignore the chemical, physical and biological processes that occur along the marshy ecotone that marks the boundary between lake and land. Economists, however, typically address various economic spheres as if they were discrete and isolated. Textbook chapters on competitive markets, to take one example, celebrate the absence of market power but fail to discuss the opportunities created where competition ends and market power begins. Consequently, much of economics that is important, interesting, and dynamic receives inadequate attention. Economists need to dive in and examine the marshy margins between various economic (and non-economic) domains.

Chapter 6: Putting It All Together

Until we confront the infiltration of the commodity system into the interstices of our lives, social change itself will be but a product of corporate propaganda.

—Stuart Ewen

So far, this book has examined how scarcity has evolved in the development of economic thought and in the formation of modern capitalist institutions. The survey of the history of economic thought revealed that modern scarcity is not a confirmation of Ricardo and Malthus. Instead, the survey showed, Godwin, Condorcet, and Mill believed that progress would not be trumped by physical constraints. Progress would be insured by the social, cultural, personal, and institutional development which accompany material enrichment. However, while material progress has been far greater than anything imagined by classical economists, non-material progress has fallen far short of that hoped for by Godwin, Condorcet, and Mill. This imbalance, it is argued, is the better explanation of modern scarcity. Accordingly, the causes and consequences of this imbalance are worth examining. Social articulation is a major source of this imbalance, and the concept of ecotones is useful for examining such imbalances. Hence, it is now time to combine these to concepts to examine the cycle of scarcity.

This chapter examines how edge effects and current biases in social articulation combine to perpetuate scarcity by making dissatisfaction an inevitable consequence of our affluence. It builds upon preceding chapters to describe a cycle that is the central theme of this book: the mutually reinforcing nature of scarcity and commercial social articulation. Both ecotones and social articulation create scarcity. Commercial social articulation, forceful and particular as it is, creates an edge between readily articulated commercial values and muted non-commercial values. This articulation asymmetry favors commodities over non-commodities. The disvaluing of non-commodities allows many of these goods to disappear, as they are displaced by goods that demand exclusion, rivalry, and manufacture. As the elements in one domain grow scarce and those in the other grow more abundant, the market encroaches upon a greater share of our lives. This process is the heart of the construction of perpetual dissatisfaction and insufficiency. On the one hand, there is the forfeiture of value. On the other hand, there is an increased reliance on goods that themselves carry the seeds of scarcity. Scarcity is both the impetus for spiraling commodity production and the consequence of the intensive and extensive expansion of the role of commodities in society.

The Disembedded Economy

The defining characteristic of the Industrial Revolution was the establishment of the market economy (Polanyi 1957, 40). Markets, in their various guises are quite ancient, but the market economy was an entirely new creation. No longer were markets restricted to certain goods, certain times, and certain locations. Instead, all of the goods manufactured by

the machine process, and, crucially, all the factors used in their production had to be for sale. Custom and tradition were exactly the opposite of what was needed; only markets were dynamic and robust enough to accommodate mechanized production (Polanyi 1957, 40-41). For that very reason, the market system demanded that markets be allowed to run their own course. Consequently, not only did the market system require that people and Nature itself be treated like commodities, "But the most startling peculiarity of the system lies in the fact that, once it is established, it must be allowed to function without outside interference" (Polanyi 1957, 41).

Thus, the creation of a market economy led to the revolutionary change of divorcing the economy from its social controls. Mechanized production required extensive markets and such markets demanded autonomy. "A self-regulating market demands nothing less than the institutional separation of society into an economic and political sphere. (Polanyi 1957, 71) Certainly for any society, one might point to what could arguably be described as its economy. To that, Polanyi argues:

> But that does not imply the existence of separate economic institutions; normally, the economic order is merely a function of the social, in which it is contained. Neither under tribal, nor feudal, nor mercantile conditions was there, as we have shown, a separate economic system in society (Polanyi 1957, 71).

This bifurcation of society had several important implications. First, it opened the door for ecotonal effects by creating the possibility of taking simultaneous advantage of two distinct spheres. Second, it placed the economic sphere in a position of ascendancy. Third, it established an economic regime whose logic was the systematic weighing of pecuniary costs and benefits.

The ecotonal opportunities created by the disembedded economy were crucial to the new economy and horrific in their impact on society and the environment.[31] In an embedded economy governed by rules of kinship and reciprocity, there is little incentive or opportunity to enhance individual gain by shifting costs on to others. However, the slow rise of capitalism had changed that:

> The transformation implies a change in the motive of action on the part of the members of society: for the motive of subsistence that of gain must be substituted. All transactions are turned into money transactions, and these in turn require that a medium of exchange be introduced into every articulation of industrial life. (Polanyi 1957, 41).

With individual gain enshrined as society's driving force and the ledger as its primary constraint, there now existed both motive and opportunity for systematic and relentless cost shifting. The costs of industrialization and urbanization—uprooting families and entire communities, the filth and crime of cities—would have been prohibitive except that the wage bill did not register social, familial, or environmental disruption. The horrors of small children working in mines and factories arose precisely because the pecuniary costs were very low though the social costs were very high. This is precisely the nature of ecotones—taking simultaneous advantage of two or more domains. In economic terms, we might say that one domain subsidizes the other. The undertakers of business were able to enjoy healthy pecuniary rewards because much of the environmental and social costs of industrialization occurred outside the realm of pecuniary accountability. This would not be the case if all social and environmental costs were commercial or readily translated into pecuniary terms. Alternatively, as in the case of an embedded economy, if social cost

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[31] Some object to such statements, arguing the Industrial Revolution was clearly beneficial to humanity. However, dramatic benefits do not preclude dramatic costs. At issue is whether all costs are

weighed heavily on the individual's decisions, the outcome would have been dramatically different. The disembedded economy allows for pecuniary benefits to accrue in the commercial realm while some of the associated costs, though real and substantial, remain unaccounted for because the exist in another realm. The constraints of one system do not apply to another. That is the essential benefit of ecotones. The explosion of economic activity associated with the Industrial Revolution is very much in keeping with the superabundance of activity known as edge effect.

Market apologists might argue a market wage did reflect social costs. Horrid conditions would restrict the supply of labor and thereby drive up wages. However, such results could not reasonably be expected when people are treated like commodities. While people have certain social, familial, environmental, and dietary requisites, commodities do not. The individual could not remove himself from the commercial milieu and unilaterally reclaim social safeguards. Private property is the right to exclude—even to exclude people from the means to production and sustenance. Indeed, for reasons discussed below, the sharp distinctions between *human beings* and the commodity *labor* gave rise to particularly dramatic opportunities for cost shifting.

This brings us to our second point. In the disembedded economy, the political and economic spheres were not on equal footing. Had they been so, it would be reasonable to expect a more balanced and agreeable level of social disruption. Yet, the market system demanded all the elements of industry needed to be coordinated by the market. Particularly, this included treating people and Nature, labor and land, like commodities. This commodity fiction, as Polanyi calls it, was the *sine qua non* of a market system:

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accounted for and how long they can be offset by benefits.

> The commodity fiction, therefore, supplies a vital organizing principle in regard to the whole of society affecting almost all of its institutions in the most varied way, namely, the principle according to which no arrangement or behavior should be allowed to exist that might prevent the actual functioning of the market mechanism along the lines of the commodity fiction (Polanyi 1957, 73).

Once society and Nature have been subjugated to the market, there is nothing more dear that can be shielded from its clutches. The economic sphere became necessarily and undeniably dominant. "All along the line," argues Polanyi, "human society had become an accessory of the economic system" (Polanyi 1957, 75). The creation of markets for land and labor was a logical prerequisite for industrial capitalism. To those socialized under such a system, the change appears deceivingly innocuous. Yet it affects should not be underestimated:

> Machine production in a commercial society involves, in effect, no less a transformation than that of the natural and human substance of society into commodities. The conclusion, though weird, is inevitable; nothing less will serve the purpose: obviously, the dislocation caused by such devices must disjoint man's relationships and threaten his natural habitat with annihilation (Polanyi 1957, 42)

The third consequence of this bifurcation of society was the rise of pecuniary accountability. This had important and somewhat ironic implications for cost shifting. Industrial capitalism, more than any other economic order, purports to systematically weigh costs and benefits. Indeed, the deliberate consideration of pros and cons is one of the chief merits of the system. This provided capitalism much of its dynamism. Innumerable projects could be, and would be, undertaken as long as they were commercially viable. The key was that commercial restraints were much more flexible than traditional ones. Instead of relying on traditional mores, the commercial check tells us simply that nothing will be done unless the benefits outweigh the costs. Yet, as has already been discussed, the system

was a commercial system created to accommodate the machine. The elements of the system were commodities, the measures pecuniary, and the purpose was the coordination of material flow. At no point was the market system designed to address the full scope of humanity and nature. Ethics, aesthetics, and reason were not its measures, and social reproduction was not its task. The market system was narrow in scope and in design but ubiquitous in application. As such, the system at once diligently weighs commercial costs and benefits and ignores substantial effects occurring outside the commercial realm. The recklessness of industrial capitalism is the recklessness of a system that contradicts its own logic. The rationale of the system is the meticulous weighing of costs and benefits, but if these costs and benefits exist outside the commercial sphere, the system is largely deaf, dumb, and blind. Still, more needs to be said about how the market registers some values, ignores others, and how all this perpetuates scarcity.

We value a wilderness because it is natural, timeless, enduring, complex, wild, non-exclusive, and because its sublime glories, while thoroughly enjoyable, have nothing in their design or purpose that has anything to do with the promotion of human welfare. In short, we like such things largely for all the traits that make them so unlike commodities. Clearly, a variety of goods can promote human welfare in a variety of ways. This truth urges two very important questions. Is commercial social articulation equally effective at coordinating the provision of all types of goods? Is a disembedded economy equally as effective at providing all sorts of goods? If we take the promotion of social welfare seriously, these questions are critically important. For rather than trying to promote welfare according to some preconceived *modus operandi*, the rational thing to do is always search for, and be

open to, the best means of promoting welfare. The deciding factor ought to be the efficaciousness of means, not habit and bias.

The fact is, though, habit and bias do play an important role in determining the means by which we, as individuals and as a society, pursue welfare. Naturally, these imbalances stem from both the strengths and the weaknesses of social articulation and the economic system itself. Understanding the strengths of the commercial milieu will help explain the types of goods that will be over-provided; understanding the weaknesses will help explain the types of goods that are likely to be under-provided. Both of these factors, it turns out, are key to understanding the perpetuation of scarcity. We shall start first with the market's strengths, then turn to its weaknesses.

Market Strengths

Two points need to be made about the strengths of the market and of commercial social articulation. The first is that strengths can indeed be problematic. The task of finding the best means of promoting welfare requires being open to all possibilities, and this requires balance. However, the great strengths of the market and of CSA, unless they were all-encompassing, must surely threaten to create great imbalance. It is difficult to imagine another fact so evident yet so overlooked. Even the most adamant proponents of the market do not claim that it is, or ever could be, good at providing everything. They are, however, quick to point to the incomprehensible power of the market—at the relentless diligence with which it coordinates the production and distribution of commodities. Where are the checks and balances on this power, and why are they not forefront in the study and practice of economics? What curbs market zeal when it leads to child labor or the ravaging of the

environment? What prevents sixty years worth of technological and economic progress from being used solely for more commodities? What would allow this progress to reduce the workweek and accommodate adults being fuller participants in their families and their communities?

The second point needing to be made about the strengths of CSA and the market is where these strengths lie. The imbalances of the market, just mentioned, are only part of the imbalances stemming from biases in CSA. Social articulation affects not only what is produced, it identifies problems, shapes goals, and suggests ways of achieving these goals. The difference is one of scope. Together, CSA and the market shape the type of goods for which are we readily able to articulate a desire, and the type of goods we are most capable of producing. In both cases, there is a strong bias towards commodities. This bias was less problematic when the most urgent problems confronting society could largely be addressed by increased commodity production. Indeed, the explosion in commodity production was excellent for providing a booming population with food, clothing, shelter, and amenities sufficient to create a standard of living that is luxurious by historical standards. However in affluent countries, this very success has made old problems far less urgent while giving rise to new problems, many that were previously unimaginable. Food, clothing, and small appliances, can readily be commodities. The ozone layer, biodiversity, healthy families, and vital communities cannot.

Clearly, commodities are the goods most readily secured by commercial society. While commodities come in a seemingly endless variety, they do in fact tend to conform to a narrow set of criteria. Commodities, we have shown, are generally exclusive, rival, individualistic, material, and require manufacture. In a relative sense, the strength in

securing such goods must necessarily be weaknesses when it comes to securing goods that, for example, are communal or that do not require manufacture. The point is not that commodities are somehow pedestrian or no longer necessary. Rather, society is biased in a particular direction; this systematic prejudice restricts society's ability to pursue welfare in the most efficacious way possible.

Market Weaknesses

There are states that need not be manufactured but preserved and enjoyed. The dazzling view of the Milky Way on a summer's night, a stand of bristlecone pines gnarled, ancient and wonderful, wild rivers, and mountain-top vistas can all be destroyed, but they cannot be produced. Such sublime and complex gifts of nature can greatly contribute to human welfare, as they have for millennia. However, many of these things are being lost daily because society cannot readily articulate its appreciation.

Economists, and other commercial apologists, often argue such losses are a reasonable tradeoff for the benefits which accrue to society from increased commodity production. Certainly, there can be reasonable tradeoffs involving damage to the natural world, and no attempt is being made here to delineate between base and higher wants. Rather, the argument is about imbalance. A systematic bias in the prevailing social articulation contributes to an unreasonable amount of damage to goods which would otherwise be preserved. Part of this imbalance, as was discussed earlier, stems from the tenacity with which commercial values are championed. The other part of this imbalance, which is our present focus, stems from the difficulty of articulating the value of goods which are not produced and which need not, or ought not, be owned. It might sound simplistic to

say all the market does poorly all of those things which it does not do well. But this is largely the point. Obstinacy in one area will inevitably lead to imbalance in that direction. The purpose here is not to develop a comprehensive list of all those things that the market does not do well. Rather, we present two broad limitations to the commercial milieu. Specifically, those limitations are consideration and expression. That is, society suffers because some values and possibilities are insufficiently considered, and some, if considered, are not readily expressed.

Sins of omission are perhaps the greatest obstacle to articulating the value of non-commodities. Such goods suffer greatly simply because the are usually omitted from consideration. A general rule of market society is that the frequency with which we are asked to register our opinions about a good's value varies in inverse proportion to its importance. Thus on a regular basis, we must reveal our preferences between Coke and Pepsi, regular unleaded and super unleaded gasoline, and between a vast array of picante sauces. The same cannot be said with regard to healthy families and a healthy environment. We are not prompted by the market to offer our preferences for such goods, and consequently our preferences are not given or even contemplated. For many inexpensive items, we have to make explicit choices almost daily. For more expensive durables, explicit choices might be made every few years. However, for most of the intangibles that we enjoy, the market never demands an explicit choice.

Many praise the market's virtues by describing it as a highly democratic institution where consumers are free to choose the goods of their choice by casting "dollar votes." Clearly, this is decidedly undemocratic since those with the most money get the most votes. However, the metaphor of consumers voting with their dollars is very apt. What is

continually on the ballot is a list of commodities. Rarely are we asked to vote for exotic species, views of the heavens or healthy ecosystems. Economists would have us believe that market decisions are the optimal outcomes of fair elections even though the biggest losers never made it on the ballot.

One might argue that this is not entirely true because there is an implicit choice to be made in favor of or against non-commodities. Those who value family can choose to work less. Those who value clean air can drive less. Those who value a starry night can live in the country. Though it contains a grain of truth, this argument is not compelling. First, the need for increased production is accepted without question. Growth as a macroeconomic goal is taught universally to economics students. Production and growth are viewed as inherently good rather than variables that must be balanced with other considerations. A sluggish economy is labeled unhealthy without further reference to the observed welfare of individuals, families, or the environment. In a society where growth is an organizing principle, the choice between activities that promote production and consumption and those that do not is, to a large degree, assumed away. Second, the market is fundamentally about explicit choices; price and desirability are to be the deciding factors—not the ease with which the choices are called to mind. Subtlety is not rewarded by the market. In a society where firms have multi-million-dollar advertising budgets, even the choice between explicit alternatives has become tenuous. Consider the case of over-the-counter pain relievers. People are willing to pay twice as much for a name brand although a generic alternative is readily available and chemically identical. If explicit choices are deliberately skewed, then certainly the danger is even greater for choices where some of the options are tacit. Clearly, habit and directed social articulation are more important than

price signals. It is not surprising that society faces a shortage of goods for which the market never asks individuals to make an explicit, affirmative choice.

One might also argue that sometimes these choices are made explicit. Consumers can cast their dollar votes for the environment by voting for tax levies, contributing to charities, or spending money on products which are environmentally friendly. Yet, a key characteristic of the market, and one of its great strengths, is that we are continually bombarded by choices. The notions that it requires no central coordination and no great deliberation other than the consideration of price are among its most celebrated merits. The explicit choices mentioned above are so less frequent, so less spontaneous, so much more contrived, that they cannot reasonably be held on par with those choices generated by the market. Additionally, consumers are obviously not in the habit of paying for goods that are not commodities. This, we can reasonably expect, leads to a strong reluctance to start paying for such goods.

Consider sticker shock. In 2000, when the price of gas rose above $1.50, consumers where outraged. There were calls for boycotts, tax relief, and congressional investigations. However, in real terms, these prices were at the low end of their historic average. The problem was that they were twice as high as they had been a year previously. Nominal prices can befuddle consumers even when it comes to commodities that they are long accustomed to buying. So why should we assume the same consumers can readily articulate the dollar-worth of countless cultural and environmental amenities when making implicit tradeoffs between these goods and commodities? Sticker shock can make consumers resentful and reluctant to pay higher, yet still modest, prices. So why should we

not expect that willingness to pay, indirectly, for non-commodities might be severely dampened by being unaccustomed to making direct purchases of these goods.

A second great obstacle is that many values, even when considered, are difficult to express. If asked to describe the value of something we really care about—a child, and old photograph, time spent with our families—we could come up with a dollar value. People have earning potential, objects have sale value and replacement cost, time has an opportunity cost. Another approach would be to articulate this value by describing our states of feeling and emotion, by referring to history and context, and by appealing to shared beliefs and experiences. Even for those things for which our attachment is less intimate, there remains an implicit choice between different ways of articulating value. Concern over whether or not this value receives its due weight in decision making leads to three questions: Which form of articulation is easier? Which is more accurate and relevant? Which is likely to get the most use?

If the most relevant way of expressing value is also the most difficult and the least likely to be used, then the socio-economic system will automatically select against the associated goods. This is not to say that such goods will never be chosen. Rather, they will simply be chosen lees frequently then they would if given perfect consideration of their relative merits. This is the case with non-commodities and the current socioeconomic system. Relative prices are the easiest and most common way of articulating value, and this favors goods for which price is a reasonable conveyance of value. Contrarily, goods valued for their complexity, their singularity, or their personal significance, are at a disadvantage. Articulating the value of these goods is not only difficult, but the most relevant and accurate way of expressing these values lies outside the standard, commercial, valuation process.

This gives rise to a horrible dilemma: for these values to receive consideration by the market, they must be converted into price by stripping them of most of what makes them special. For example, nearly all of the essential value of human life is lost when we say a life is worth $50,000, $250,000 or even, $5,000,000. Few people command so much money, none are worth so little.

It is axiomatic that the value of a loved one or a sunset cannot be summed up succinctly. The greatest of poets may convey, in a few stanzas, much about love and beauty. But even when done well, such verse cannot rival the succinctness of the price of a commodity. If one were to say that a bottle of ketchup is worth about seventy-five cents, he is not being gauche, contentious, or deceptive for having said so. Ketchup is a commodity. As such, it was produced so that it might be sold. There is a definite logic in using relative prices to coordinate the production of commodities. Accordingly, much of ketchup's worth is conveyed by its price. True, this price might reflect Mexican labor that is poorly compensated for long hours and exposure to dangerous chemicals, and it might be distorted, in the other direction, by the oligopolies of the condiment industry. These inaccuracies not withstanding, we might suspect a better price to be $2.25, but we do not feel something fundamental to humanity's relationship with ketchup is lost on a price tag that reads seventy-five cents. Prices ascribed to a person, specie, or historic landmark, or to beauty, biodiversity, or serenity, no matter how well intended or well researched, do fail to convey something fundamental about the values they are meant to reflect.

Again, the argument here is not that commodities are morally inferior to other goods. Instead, the point is commodities and prices are part of a commercial construct. The benefits and costs of within such a commercial system are pecuniary in nature. Price is a

reasonable conveyor of pecuniary value. It is simply not equally as good a conveyor of other types of value. For the grocer, apples and oranges are comparable. The benefits and opportunity costs of both are pecuniary. For society, an automobile and the environmental quality enjoyed by posterity are not similarly comparable.

The difficulty of articulating non-commercial values leads to the question of whether it is worth the great effort of economists to try to distil these values into prices or shadow prices. Some pecuniary considerability, one could reasonably argue, is better than none. The issue is imbalance, and shadow prices can ameliorate that problem. Certainly, in the context of social articulation, one could see how contingent valuation techniques would be useful. Such work in economics creates forums and gives voice for the articulation of values that would otherwise be ignored. However, *ad hoc* remedies, though useful and necessary, are not the same as actual solutions. Part of the problem, as suggested above, is that these difficult *ad hoc* contrivances cannot effectively counter the spontaneous and effortless valuations of the market. Additionally, there is the whole matter of the context of the role of prices and a market economy in the first place.

While material sufficiency declines in importance and distributional concerns rise, social articulation based on exclusion and scarcity, though favorable to commerce, is hardly adequate. Society needs to be able to give adequate voice to non-market concerns. The problem is not merely that price is incapable of fully expressing the values exhibited by the heavens, the Colorado Plateau, or an ecosystem. The broader problem is that the entire cultural milieu in which price is the primary instrument of social articulation is no longer appropriate. The growing shortfall, if carried to an extreme, is analogous to translating a Thomas Wolfe novel into Latin. There are always problems with translations. Word play,

vernacular, innuendo—much of a work's intrinsic merit—stands to be lost. There is, however, value in translations. Not all is lost, and what remains can now be enjoyed by a larger audience. Yet, translating twentieth-century American literature into Latin would be marginally valuable at best. Clerics and academics might praise it as a demonstration of technical virtuosity, but as a translation, its instrumental value would be negligible. So it becomes with our efforts to determine shadow prices of non-commodities. The justification of such work has always been as an imperfect attempt to lend the voice of market value to these assets. Judged imperfect by all and morally repugnant by many, it was nevertheless believed by economists and others that translating cultural, aesthetic, and ecological values into commercial ones was the best way to ensure their continued existence. Still, while such pricing was growing more common and sophisticated, the world to which it owed its contextual justification was disappearing. In the West, small scale, free market competition exists primarily in the middle chapters of economics texts, and material insufficiency is no more the economic problem than Latin is the language of science. Translating values in to the language of scarcity, competition, and commodity production is no longer appropriate. Beyond the shortcomings of translation, and these are legion, the commercialization of value has lost its instrumental justification. While a rear-guard defense need not be abandoned, this book argues commercial social articulation in general, and prices in particular, serve an instrumental purpose within a particular context. The substantial changes in this context are eroding their instrumental justification.

Cost Shifting

In making the distinction between things that are readily articulated and those that are not so, it would be one thing to say that values tend to fall in one category or another. This would be trouble enough. For over time, as happenstance lead to various decisions between two such values, imbalance would grow as values from one set were systematically selected over values from the other. Yet, this is not the complete picture; for weakness creates opportunities for the strong. So it is with the destruction of value. Happenstance plays a minor role compared to the systematic targeting of values hobbled by their inarticulability. This section examines how an ecotone of values accommodates cost shifting and thereby promotes commodities at the expense of non-commercial values.

In the vocabulary of proceeding chapters, the collision of articulable and inarticulable values creates an ecotone. Ecotones, it should be remembered, provide important opportunities for cost shifting by creating the opportunity to simultaneously exploit two systems while avoiding many of the constraints of each. In this case, non-pecuniary costs effectively subsidize pecuniary gains. That is, whenever some of the costs of commercial activity can be shifted into the non-commercial sphere, the difficulty in articulating such costs discounts them and promotes commercial activity beyond an optimal level. This cost-shifting behavior, where the weaknesses of the non-commercial sector are actively exploited, is the heart of the rise of commodities and the continual construction of scarcity.

One of the celebrated characteristics of market competition is that competitive pressure and the profit motive create strong incentives for firms to reduce costs. Conventionally, economists argue such cost reduction is achieved through improvements in

efficiency and technology. Because of this narrow focus, the supposition that competition is good for society is paraded as a logical and self-evident economic conclusion. The profit motive encourages firms to reduce costs and society benefits from better technology, improved efficiency, and lower prices. The self-interest of the entrepreneur has made everyone better off. This reasoning is flawed because it ignores both the fact that firms devise a myriad of machinations to avoid the burden of competition, and that cost shifting is often more convenient than cost reduction. Costs are not so much addressed as they are avoided—sloughed from one economic player to the next.[32]

Perhaps the most fundamental and most overlooked characteristic of market competition is that whenever it succeeds at keeping prices and profits low, whenever it forces producers to conform to the wishes of consumers, it creates enormous incentive for business to avoid this competition. As we have seen earlier, such market circumvention is the predominant characteristic of modern capitalism. It is manifest in the rise of corporate libertarianism, and in the tens of millions of dollars spent daily on advertising. It is important because of the way it facilitates and combines with cost shifting. Our concern here is what happens when market costs are shifted out of the market arena altogether.

The collision of things for which the market is well suited with those for which the market is poorly suited creates an important edge. Since the prevailing pattern of social articulation is largely commercial in nature, values such as the ones associated with family, beauty, or nature are not readily articulated. Specifically, the price mechanism does not promulgate the value of these goods with the same diligence and accuracy as it does for the value of commodities. This effectively disvalues non-commodities thereby creating cost-

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[32] This use of the word *slough* is borrowed from a paper presented by Doug Brown at a 1995 meeting

shifting opportunities for industry. Industry benefits whenever the costs of production can be shifted onto domains where these costs are not easily conveyed. Noise, stress and loss of diversity are all examples of this process.

Understanding cost shifting is imperative to understanding the perpetuation of dissatisfaction. Costs are not eliminated when they are shifted from one sector to another. They may change magnitude and form. They may even be less apparent, but they still exist. The production of commodities weighs pecuniary benefits against pecuniary costs but substantially ignores the costs that are shifted out of the commercial sector. Such cost shifting is essential to commodity production precisely because it allows production to occur even when such production will be deleterious to general welfare.

External costs have been an important issue in economics for a long time. These externalities were generally associated with material phenomenon, such as effluents and emissions, and perceived to be a minor, sporadic part of the economy. Increasingly, externalizing costs is recognized as a fundamental business practice: "Rarely, if ever, will full costs be internalized in an unregulated market, because competitive pressures make it necessary to externalize costs whenever possible. A producer that successfully externalizes social and environmental costs will earn a higher profit and attract more investors and can offer a lower price and capture a greater market share" (Korten 1995, 90-91).

These externalities, as they are commonly understood, are but a subset of the cost shifting that occurs along the articulation ecotone. Damage done to the environment is the material correlate to the damage inflicted upon non-commercial values. These broader instances of cost shifting are not specific to a firm or an industry. Rather, they are generated

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of the Western Social Science Association in Oakland, CA.

by the economic system as a whole. As such, they might usefully be called macro-externalities.[33] The damage inflicted by these externalities is not to a specific river or stream or to the air quality of a specific city but to the non-commercial values and the goods intimated by these values.

As discussed earlier, the ecotone between private and communal property leads to cost shifting in the form of unwanted private property being dumped into the commons. For example, throughput which is privately owned coal at one stage of production is deemed unworthy of ownership at a higher level of entropy and is promptly dumped upon the commons. This is typical of an externality in that pecuniary costs have been avoided by one accounting entity only to be incurred by another. The costs of pollution control capital and the safe and sustainable disposal of waste are avoided but others suffer from increased healthcare costs, decreased property values, or diminished profitability. However, such an example is only the most obvious form of cost shifting; for though they are incurred by others, the costs remain explicit. This form of cost shifting is serviceable from the point of view of the individual producers or consumers. To accommodate overall economic growth, however, it would be better still if they could be shifted out of the realm of pecuniary accountability altogether. This is precisely the nature of macro-externalities. Here the shifted costs are the non-pecuniary costs generated by the pursuit of pecuniary gain. This cost shifting reflects both the ecotonal activity, discussed in chapter 5, and business's general retreat from the open market, discussed in chapter 4.

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[33] The term externality is problematic and is misleading when it suggests such activities are not intrinsic to the nature of the market. However, the term is widely used by economists and in as much as it connotes operating outside a particular sphere of accountability, it is not entirely inappropriate.

The whole point to macro-externalities is that the relevant costs never be calculated and marked down on any ledger. Industry reaps benefits in one sphere while using another to escape much of the cost. Costs are never explicit either before or after they are shifted. It is somewhat difficult, therefore, to apprehend such cost-shifting. Nevertheless, the costs are real and are manifest in the deterioration of families, cultures, and the environment. The shifting also creates real opportunities and allows pecuniary gain that otherwise would not be possible. Sometimes, geographical and physical correlates to these aggregate externalities can make them easier to detect. Consider, for example, the way modern industry is attracted to the non-industrial world. Differences in wages and other factor costs as well as differences in laws meant to protect workers and the environment create an important edge between developing economies and their long-industrialized counterparts. In a geographical sense, this edge allows the industrial world to encroach upon new territory—first claiming ports of trade and large cities and gradually spreading into the hinterlands. However, this is simply the geographical correlate to the colonization of traditional livelihoods by commercial society. The primary change is in the cultural, not the geographical, extent of the market. Likewise, pollution arising from the collision of communal and private properties can be understood as a collision between articulate and inarticulate values. As with the industrialization of the South, the motive force is the opportunity created from the fact that institutions for commercial articulation are well-developed and those for articulating cultural and ecological values are poorly developed.

The ecotone between articulate and inarticulate values is also helpful in understanding the damage done by the mass-marketing required to accommodate the explosion of commodities. This edge effect—which is destructive to non-commercial

goods—is evident both in the marketing itself and in the goods it promotes. At the level of the firm, the intent and effect of an ad is to promote a particular commodity especially in comparison to a close substitute. At the aggregate level, however, advertising is at the expense of non-commodities. At first brush, one might guess that Budweiser and Ford are the primary casualties of the marketing campaigns of Coors and General Motors. However, substantial damage from such advertising is to family, beauty, and the environment. Car companies thrive while public transportation languishes. In the cola wars, public health is the only casualty while the warring "competitors" manage to thrive. While soft drinks are associated with a variety of health problems from tooth decay to obesity, the annual per capita consumption of carbonated soft drinks more than doubled from 24.3 gallons in 1970 to 53 gallons in 1997 (U.S. Census 1999, 876). Competing oligopolists throughout the economy manage to prosper quite well, but solicitors invade family time, billboards blight the countryside, forests are razed, and landfills overflow from the print ads that constitute the bulk of our newspapers.[34]

This social and environmental vandalism is not merely a regrettable, unintended consequence of business. It is deliberate both as a prescription for profit and in its effect on the cultural and ecological environment. Solicitors target the times when they know families will be home, news is chopped up and widely scattered so readers are forced to thumb through ads, and billboards and urban neon are part of the "planned dissonance" that characterizes modern business. Such disruption is not only deliberate but also self-feeding. As Galbraith remarks, "An advertising billboard that blends gracefully into the landscape is

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[34] Cited in Korten (1995: 287). About 60 to 65 percent of newsprint is advertising.

of little value; it must be in sharp contrast with its surroundings. This jarring effect then becomes competitive" (1967, 316).

It may still be unclear how marketing is a form of cost shifting. Here again, the key is an ecotone created by differences in the ease of articulating certain values. The ecotone exists because, adjoining the commercial sphere, there is a realm without the same pecuniary constraints and articulate competitors. Cost shifing occurs when pecuniary rewards are made possible at the expense of peripheral values. Well-articulated commercial imperatives find it difficult to compete against each other but find a relatively easy mark in the inarticulate imperatives of ecological and cultural health. Business avoids the constraints of the commercial sphere by choosing a weaker competitor. That is, the main function of mass marketing is not for business to compete against business but to reduce such competition. Much of the expected gains from marketing result not from the falling profits of a competitor, but from overall economic growth—growth that comes at the expense of families, society and the environment. The need for such marketing has long been recognized by the industry. In the 20s, Walter Pitkin professor of marketing at the Columbia School of Journalism argued that national ad campaigns, even those that sought to boost an entire sector of the economy, did not go far enough. Instead what was needed, summarizes Ewen, "was a broad scaled strategy aimed at selling the way of life determined by a profit-seeking mass-productive machinery" (1976, 53-54). Pitkin urged his colleagues to broaden their scope beyond even sector-wide advertising toward a "philosophy of life advertising" (Ewen, 1976, 54). From a macro-commercial standpoint, it is best if consumers do not choose between one commodity or another. When, instead, consumers work longer to buy both commodities, it is families and the environment that bear the

opportunity cost. These costs are largely ignored to the benefit of the commercial sphere. Remember, the creation of mass marketing and the consumer culture was specifically for these macro concerns. The impetus was the protection of each industry by promoting all industry.

Imbalances in social articulation provide another means for industry to circumvent *market* competition. The most significant rivals of cars, clothes, and electronics are not each other but safety, beauty, ecological health, and leisure. In terms of game theory, business competitors can increase the sum of the payoff matrix by encroaching into the non-market arena. For industry, such encroachment is an attractive and natural alternative to relegating itself to the confines of the market. The tenacity of market articulation is matched only in the market. Elsewhere, it cannot be matched, and this asymmetry gives rise to opportunity. While industry is not able to escape the burden of competition altogether, it is able to move into a realm where it competes against values handicapped by inarticulation. For business, and all those concerned largely with winning, the best competitor is a crippled competitor.

Returning to the jargon of game theory, marketing practices are strategies used by players competing in a game—one that is often explicitly or implicitly viewed as zero-sum. Firms compete both for profits and for market share; the winners' gain mirrors what is forfeited by the losers. Yet, all the firms can benefit from an increase the size of the payoff matrix, and it is certainly within the power of business to effect such a change. Airlines, breakfast cereals, long distance carriers, soft drinks, credit cards, and fast food chains commonly use schemes involving points, bonuses and games—not just to entice consumers away from competitors but to increase overall purchases. We do not generally see such

gimmicks for items—like drugs, toothpaste, and toilet paper—that we tend to use in fixed quantities. Similarly, cross-marketing is a major trend, and the culture of consumerism is glamorized by TV shows, and magazines whose business it is to sell ads. Even news organizations play a role by running features on home decorating, travel, technological gadgetry, automobiles, and entertainment—features that are often based on the press releases of corporations or business-backed "think tanks." "According to the *Columbia Journalism Review*," cites Korten, "more than half of the *Wall Street Journal*'s news stories are based solely on press releases" (1995, 146). Neither firms nor their payoffs, however, exist in a vacuum. All increases in the total payoffs which are not accounted for by improved efficiency and technology, must come at the expense of other market sectors, society, the environment, or the time and energy of individuals.

Frighteningly, we already find ourselves living in an Orwellian-like world. Except, instead of the state, corporations filter our news, shape our preferences, and warp our very families, communities, and environment to their own ends. That this stark, routine, and undemocratic use of power meets with so little resistance dramatically shows how CSA shapes social consciousness and how its ceremonial belief in competition and consumer sovereignty masks the wielding of which is constrained neither by bonds of kinship, community, nor even nationality.

All of this is to say that business' conventionally defined competitors are only a small part of the strategic horizon. The competition of business is not just business. Stealing customers from each other is unsatisfactory and, in the end, self defeating. An attractive alternative is to fuel the aggregate drive to consume. The broad commercialization of social articulation was much preferred (from the business standpoint)

to creating *ad hoc* yearnings for a particular commodity. Early on "It was recognized that in order to get people to consume and, more importantly, to keep them consuming, it was more efficient to endow them with a critical self-consciousness in tune with the 'solutions' of the marketplace than to fragmentarily argue for products on their own merit" (Ewen 1976, 38-9). If people wish to eat, be entertained, unwind, go from one point to another, find peace, show affection, exercise, or be kind to their children, the important thing is that they spend money. How or where they spend it is only of secondary importance. These things, like an endless array of other human activities, have no logical or necessary connection to pecuniary expenditure. The perpetual suggestion of such connections expands the payoff matrix for business but does so at the expense of the critically important non-commercial world. Firms can flourish at the expense of other firms; one market sector can thrive at the expense of another, and both of these can flourish at the expense of society, the environment and the time and energy of people. This is the historical intent, the contemporary motivator, and the logical macro-consequence of mass marketing.

Mass-marketed goods are not the only commodities which encroach upon the non-commercial sphere. All commodities do so to greater or lesser degree. Each commodity produced and offered for sale is part of a nexus challenging non-commodities for a greater stake in the lives of people. This in no small way is attributable to the way shopping has become an American pastime and impulse buying has become a staple of modern commerce. But the main reason is that much of the costs of consumerism—namely the damage done to families, society and the environment—are not borne by the commercial sector. Society's consumption is subject to a flexible constraint. This constraint is social and ecological. Were it rigid, it would demand that consumption do no harm to families and

not diminish the diversity and sustainability of society and the environment. A rigid constraint would not prevent commercial action, but a flexible constraint, which effectively ignores such desiderata, will allow a welfare loss. Whether or not we can expect this loss to be made up for by pecuniary gains depends how even the registration of such gains and losses are balanced. Such balance is doubtful when one considers both the greater facility with which commercial values are articulated and the fact that the inability to articulate and defend certain values is precisely what attracts the attention of business in the first place.

Nature and Humanity

In ecology, ecotonal effects are greatest when two systems meet along a steep gradient. If the transition between two systems takes place across a broad area, then opportunities for taking simultaneous advantage of both systems are greatly reduced. Ecological and institutional ecotones are clearly different, and it would be imprudent, in this case, to infer economic conclusions from ecological observations. Nevertheless, in institutional ecotones, a similar phenomenon seems to take place for similar reasons. The steeper the gradient, the more dramatic the edge effects. Consider a town where schools, jobs, entertainment, and other amenities were centrally located. If property taxes where very high in the town and low outside its limits, then we would likely observe a concentration of housing developments right around the city's edge—close to the amenities without having the tax burden. Incentives for this path of development would be reduced if the tax gradient between town and country was less severe. Higher taxes in the country, or lower taxes in town would reduce the incentives for sprawl. Alternatively, tax zones could be created in the form of giant concentric circles, with high taxes in the center and progressively lower

taxes in each outer ring. Conceivably, if the costs of the taxes were proportionately offset by amenity proximity, then there would be no particular reason for housing to cluster in one zone or another. In other words, a smooth gradient would eliminate edge effects.

In the articulation ecotone, surely there is no steeper gradient than those associated with land and labor. In the exquisiteness of human relationships and the marvels of nature, we find the quintessential examples of goods whose complexity and richness defies simple pecuniary expression. At the same time, land and labor are indispensable elements of the industrial process. For this reason, humanity and nature were transformed into what Polanyi described as fictitious commodities. "Machine production in a commercial society involves, in effect, " he pointed out, "no less a transformation than that of the natural and human substance of society into commodities" (1957, 42). Here, the collision between commercial and non-commercial values is at its sharpest. The values that are stifled and largely ignored are very great; the effective subsidy is likewise great. The resulting scale of industrial activity is vastly larger than it would be if CSA expressed cultural and natural values as easily, repeatedly, and convincingly as it does commercial values. If beauty, biodiversity, and love were widely, forcefully, routinely, explicitly, and habitually affirmed, commercial production could not remain the central theme of society.

The steep ecotonal gradient of fictitious commodities is tragic and has significant welfare implications. Activity is frequently drawn to the unique opportunities found along ecotones. As mentioned before, this is called edge effect. In this case, the more costs are muffled, the further commercial activity can intrude beyond a level that would otherwise be appropriate. For this reason, we find commercial activity concentrated precisely where it is most contrary to social welfare. The logic of edge effects creates a mechanism whereby the

more contrary a value is to those espoused by the prevailing pattern of social articulation, the greater the opportunity for obfuscating the true and full costs of an activity. Deforestation and mass extinction in the name of cheap hamburger is one example of such ecotonal effects. Others include prostitution, sweatshops, child labor, and the chronically long workweeks of even affluent American parents.

A growing cycle

The social phenomenon of the regeneration of scarcity is caused by compositional changes in our socioeconomic system. The specific compositional changes are the rise of goods consistent with CSA and the withering away of those inconsistent with CSA. The edge effects mentioned above are a major source of these compositional changes. Asymmetry in articulation favors commodities. At the same time, disvaluing non-commodities allows many of these goods to disappear. As the elements in one domain grow scarce and those in the other grow more abundant, the market encroaches upon a greater share of our lives. This process is what facilitates the construction of scarcity. On the one hand, there is the destruction of value. On the other hand, goods that demand exclusion and require manufacture—goods whose nature is fundamentally tied to scarcity—are offered in their place. Scarcity does not simply prompt commodity production. Rather, scarcity is constructed by the intensive and extensive growth in the role of commodities in society.

The flourishing of readily articulated values and the stagnation of tacit values creates great imbalance. Galbraith's *social imbalance* examines much of this phenomenon. However, his social imbalance is just a subset of the ubiquitous, though often subtle, caused

by articulation asymmetries. Galbraith was focusing mainly on the imbalance between production for the public sector and that for the private sector. He defined social balance as "a satisfactory relationship between the supply of privately produced goods and services and those of the state" (1958, 185). This balance, however, is only part of what can be upset by wide-spread encroachments of the market. Asymmetry in the articulation of value has also led to increasingly problematic imbalances in leisure, beauty, family, and the environment *vis-a-vis* the market. Galbraith (1958b, 99) does argue that such things as schools, parks, and orchestras do have small material requirements. However, there are other goods—such as dark night skies, worker safety, and time spent with family—whose enjoyment could lead to a decrease in throughput. The imbalance, in other words, extends beyond the types of goods society produces—it also includes goods that society destroys or squanders. Determining what part of production should go to the public sector is an important question. Determining what part of social welfare should come from production is a separate question. The market addresses both of these questions poorly.

In Galbraith's analysis, the source of imbalance was also starker. Wants creation via the marketing of private commodities was the source of the problem. "The engines of mass communication, in their highest state of development, assail the eyes and ears of the community on behalf of more beer but not of more schools. Even in the conventional wisdom it will scarcely be contented that this leads to an equal choice between the two" (1958, 190). Certainly, Galbraithian themes are fully consistent with the ideas found here. However, though I usurp the phrase, *social imbalance*, as it is used here, is not synonymous with Galbraith's usage. It is not just that commercial values are tirelessly championed; non-

commercial values are handicapped from the start. It is not just that publicly provided goods are underpovided; all non-commodities are at risk.

The Loss of Value

Though rarely considered, the value of goods that have been lost forever, or that are simply squandered an a daily basis, is unimaginable. They range from the quiet of a morning uninterrupted by leaf blowers and traffic, to the security and joy of stable communities and nearby extended families, to entire ecosystems. The ubiquitous nature of these costs explains part of their total enormity. Commercial social articulation does not account for the individually trivial byproducts of commodity production and consumption. It will pay no heed to an extra stench here, more noise over there. A bit of solid waste, a puff of some invisible emission, a hint of alienation, a dab of frustration, these will have no commercial weight. The gallon of water that pushes an aquifer's use above its sustainable rate will go unnoticed. Catastrophic change also accounts for the enormity of noncommercial costs. The wholesale destruction of habitat, the cataclysmic loss of species, the eradication of cultures and languages, the damming of rivers, the destruction of scenic vistas, all sharply reduce the world's richness and wonder that humanity is uniquely capable of enjoying. In all these cases, big and small, social welfare is damaged by larger degree than what is conveyed under the prevailing social articulation.

Accommodating the Increased Demand for Commodities

In the gulf between the articulate and inarticulate domains, business can avoid costs by ignoring them. The value lost in translation (to commercial value) allows business to slough part of these costs onto society and the environment. That is, that part of a landscape's beauty or biodiversity which is not captured in its price—as determined by the

net present value of the stream of rents which it could command—can be freely destroyed by an industrialist while the true costs are elsewhere accrued. However, reducing pecuniary costs by marginalizing certain values is only part of the picture. Over the long run, commercial procession is more important. The destruction of non-market values creates a need and an opportunity for their replacement by commercial ones. The human frustration of being treated as a commodity, hours spent commuting through heavy traffic, landscapes obscured by "commercial art," stars washed out by light pollution, silence replaced by the incessant beeps of cell phones, pagers, and watches, each of these facilitates our demand for fast food, movies, vacation escapes, and therapy. Pollution increases the need for medical services and bottled water. The remoteness of extended families increases the need for counseling, childcare, entertainment, and long-distance phone service. Goods that require the consumption of resources systematically replace those that do not. Goods that can be enjoyed by many free are replaced by goods that, for a price, are enjoyed by individuals. Business people weigh costs against earnings. Yet, it is difficult for society to act in similar fashion. How do we discount that part of commodity consumption which poorly fills the void left by rivers which no long run clean and free, landscapes which are no longer scenic, and families which are no longer close? The importance of commercial procession is that commercial transactions make up an increasingly large share of our lives. Food, entertainment, mental health, childcare, self esteem all become commodities.

The Accompanying Seeds of Scarcity

In addition to the destruction of non-commercial values, the second tragedy of commercial procession is that commodities contain within them the seeds of dissatisfaction.

The spread of commodities spreads scarcity. As explained in chapter 3, the elements of CSA, as shaped by the dictates of commodity production, are virtually identical to the elements of scarcity. Exclusion, dynamism, individualism, acquisitiveness, competition, and materialism individually and severally promote the culture of scarcity. Together, they accommodate the commoditization of life. Commodities themselves are the embodiment of scarcity. "Commodities," Leiss plainly states, "are by definition things that are relatively scarce" (1976, 32). Here, then, is the fountain of perpetual dissatisfaction. As commodities are used for more and more things, and as more and more commodities are used for each of these, the logic of commodities becomes increasingly dominant in individual lives and in the social fabric. The logic of commodities is scarcity, and it is scarcity that encroaches into nearly every aspect of human life. Once gain, it is important to remember that scarcity is a social construct. It is a compulsion that whatever one has is insufficient. It is this compulsion that is inseparable from the commoditization of life.

The Cycle Continues

The final element in the cycle of scarcity is an explanation of how such a negative trend can persist. The answer is commercial social articulation. Social articulation shapes society's identification of problems and the way it addresses these problems. When the problem is dissatisfaction, then the solution resoundingly prescribed by commercial social articulation is more commodities. The failings of commodity production, rather than suggest a need for curtailment or other alternatives, make the need for commodities seem all the more urgent. A shorter workweek, greater equality and sustainability, a cleaner environment, the elimination of global warming, the protection of rainforests, are all

dramatic and reasonable ways of promoting social welfare. However, they receive little or no consideration because they are contrary to CSA. In fact, the conventional argument against all of these is that they would obstruct commodity production. Yet the free reign of the market is doubly incapable of producing a balanced outcome because in is incapable of adequately accounting for non-commercial values, and it is blind to the role that commodities play in perpetuating dissatisfaction.

Chapter 7: Towards Balance, Plenty, and Happiness

A country without a Lexus will never go very far. A country without healthy olive trees will never be rooted or secure enough to open up fully to the world.

–Thomas Friedman

An Overview

In his book, *The Lexus and the Olive Tree* (1999), Thomas Friedman contrasts the highly automated production of Lexus cars to olive trees which still link modernity to values and traditions of ancient agrarian economies. He uses these two goods as metaphors. Olive trees "represent everything that roots us, anchors us, identifies us and locates us in the world—whether it be belonging to a family, a community, a tribe, a nation, a religion or, most importantly, a place called home" (27). The Lexus "represents an equally fundamental, age-old human drive—the drive for sustenance, improvement, prosperity, and modernization" (27). The problem is individuals, communities, and nations are often torn by these competing impulses. The manifestations of this conflict range from feelings of personal guilt to violent and reactionary acts of terrorism. How do we keep the Lexus from running over the olive trees? How do we keep the olive tree from blocking, or falling on and crushing, the Lexus?

The issue, of course, is one of balance. In this book, we have argued CSA favors the Lexus and that owning a Lexus helps prompt the desire for a bigger, newer, more luxurious Lexus. The challenge is to find ways of correcting this bias, to give voice to traditional values without embracing reactionary backlash. The solution, easier said than done, is to identify and mitigate the headstrong propensities of CSA while giving strong and articulate voice to non-commercial values.

We have reached a point where it is time to summarize the arguments of this book and elicit its implications and conclusions. Accordingly, the next section will review the main arguments of the preceding chapters. The following sections will specifically address first, the significance of the social articulation concept, and next, the usefulness of an understanding of economic ecotones. Another section will then examine how to break the cycle of scarcity. The succeeding two sections will examine the importance of happiness as a normative economic goal, and then, the claim that society needs a new ethic. A concluding section will then be offered.

This book has examined the history of the intellectual and economic contexts of scarcity, and it has shown how imbalance and the peculiar, systematic biases of commercial social articulation perpetuate scarcity by nurturing dissatisfaction in the midst of tremendous affluence. In short, it is fair to say this book argues that the current socioeconomic system is fundamentally flawed and disastrously unresponsive to many of the needs and challenges of modern society. That may strike some as a bit radical or extreme. Yet, individually, the arguments this book offers are generally quite moderate. Nevertheless, similar conclusions are often reached from premises that are much more radical, controversial, or judgmental; so it is worth reemphasizing the assertions this book does *not* make. This book does not argue

that capitalism is evil. It does not argue that materialism, greed, individualism, and competitiveness are shameful or even undesirable. It does not assert that an appreciation of wonder of the modern array of commodities is somehow boorish or pedestrian. It does not posit depraved CEOs or global tycoons red in tooth and claw. Finally the book does not, and will not, argue affluent folks around the globe must sacrifice their own happiness for the sake of trees, and parrots, and cherubic, third-world babies.

Instead, the issue is one of imbalance. Our socioeconomic system does not do all things equally well, and the things it does exceedingly well are not coterminous with all that contributes to healthy and happy societies. This suggests nothing more, and nothing less, than a need to ensure society does not emphasize less beneficial pursuits at the expense of ones that, while understated, are more beneficial. Given this, our approach has been to identify the imbalances that are characteristic of modern market industrial society. Specifically we have investigated the construction of scarcity. This flavor of unhappiness creates an imbalance such that, in our exceptionally affluent society the passionate pursuit of still more commodities seems not only reasonable, but is highly regarded as the inescapable and unassailable freeway to happiness.

We started with an examination of early concerns over the economic conceptions of scarcity. While modern economics borrows from Malthus and Ricardo in name, the neoclassical fruit fell far, far away from the classical tree. Ricardo and Malthus were fundamentally concerned about physical constraints as they related to distribution and the ultimate destiny of capitalism. Their apprehensions were poor predictions. Society is fantastically productive and affluent. In modern economics, distribution is a specialized field, not a central theme. And concern over capitalism's destiny is esoterica that is easily

and commonly ignored. Stripped of its *raison d'être*, all that is left of classical scarcity is a mild fear and loathing of nature stemming from it being misidentified as the source of insufficiency. The same chapter also examined a variety of social factors that give rise to scarcity. Such factors include the relativity of wants and affluence as well as the fallacy of composition. In modern societies characterized by unprecedented affluence, such social factors offer better explanations for feelings of insufficiency.

The following chapter introduced the concept of social articulation. Different cultures view the world differently. These differences strongly influence the way societies establish, express, and pursue goals. In our society, the pattern of social articulation is sharply influenced by the need to accommodate industrial market society. In the next chapter, it was shown how social articulation was refocused to accommodate the needs of mass production and globalization. The argument was not that elements such as individualism, materialism, exclusion, and competition were morally or otherwise inferior. Rather, they are simply biases of our socioeconomic system. Individually each element tips the scale in certain directions. They direct us down certain paths, to use a different metaphor, while obfuscating alternative routes. Collectively, they also dramatically accommodate scarcity—a fundamental pervasive bias of commercial society that directs both our economy and economic inquiry.

So what? Does a sharp disparity in the ease with which we express some values compared to others cause problems? To address this question, the book looked at the concept of ecotones. Such stark discontinuities create opportunities to take simultaneous advantages of multiple systems while avoiding the constraints of each. These unique ecotonal opportunities are, of course, often very beneficial. However, economic ecotones

are typically contrary to the rationale of the market. This rationale involves the systematic weighing of costs and benefits at the margin. Ecotones, however, are essentially opportunities to avoid costs of one system by shifting them elsewhere.

Imbalance and this ecotonal cost shifting are key to understanding a host of social and environmental ills. It is not that we are blind to the virtues of family, community, or nature. However, there is a persistent and pervasive favoring of commercial values. Cost shifting accelerates the ascending march of commercial values at the expense of values that are not so readily articulable. Scarcity arises from both the scarcity orientation of commercial social articulation and the dissatisfaction that results when values are lost due to an inadequate ability to preserve or pursue them. The very commodities we have in abundance contain the seeds of scarcity. What is more, these commodities have been purchased by an inordinate sacrifice of nature, family, community and leisure. The cycle of scarcity is completed when society seeks escape from its ennui via the path suggested by commercial social articulation. The failure of economic growth to provide a discernable, sustained, and widespread increase in happiness thereby prompts us to intensify our efforts to expand the array of commodities. All the while, the non-commercial sphere is narrowed as we allow work and commerce to chisel away at the environment, family time, and the sovereignty of local communities. Occasionally, we may suspect this very process, this rat race, may actually detract from our happiness. But once again focusing on commodities, we imagine it is shameful for those with so much to complain or criticize. Besides, the economists assure us that our economy and we are rational. Each loss is necessarily more than made up for by some gain. Every action, every inaction, is exactly the right step towards making us as happy as we can possibly be. But such economists and our guilty

feelings of self doubt are wrong. It is only by recognizing the limits of social articulation in general, and the biases of commercial social articulation specifically, that we can break the cycle of scarcity and adequately pursue the widest variety of paths towards happiness.

Next, a brief examination of implications is in order. Hopefully, a better understanding of the sources of scarcity suggests ways of ameliorating the problem. The following concluding remarks are meant to both address imbalances found in society and the economics profession and to further illustrate the concepts of CSA, ecotones, and the social creation of scarcity. There are significant implications for the economics profession. The importance of social articulation demands that economists should routinely move beyond price theory, to something much broader, when evaluating private and social decisions. Systemic biases, not just price ratios, must be corrected if we are to achieve desirable outcomes. This proactive form of economics resembles Adolph Lowe's notion of Control more than it does conventional economics.

There are also important implications for society in general. This does not include a sweeping rejection of the elements of modern society. Mill did not reject rationality, action, or utilitarianism, yet he knew these virtues were incomplete. He learned that lasting happiness required the cultivation of more subtle susceptibilities. Similarly, the recommendations made here are meant to augment and balance social articulation. This is not a call for abstinence and sacrifice. Rather, it is an expectation that a society more fully open to a wide range of human experience will be freer and happier

Balanced Social Articulation & Meaningful Economic Inquiry

The concept of social articulation provides economists with an opportunity to move beyond being cheerleaders for the market. It is an opportunity to focus on social provisioning and not just market outcomes. A discipline that is truly concerned about social welfare cannot reasonably ignore real and enduring sources of happiness nor can it arbitrarily favor some sources over others. Economists well understand the importance of flexible, competitive prices. However, there is something antecedent to getting prices right, and getting it right may often preclude the need for prices. Before prices are ever ascribed, social articulation has already determined, for example, what is desirable, sacred or taboo. Yet, these patterns of thought can become inflexible and past-binding. Economists should move beyond the important but narrow part of social articulation known as prices. They should demystify pricing institutions and delineate the boundaries where market encroachment becomes deleterious to social and environmental welfare. They should aggressively identify systematic biases of the prevailing socioeconomic system. They should continually compare these biases to perpetually evolving list of desiderata developed in a multidisciplinary framework. Finally, they should help develop non-price institutions that give voice to non-commercial values, thereby helping to balance social articulation. Specifically, economists should seek to give individuals the tools they need, with regard to social articulation, to bring about socially desirable outcomes.

The first steps are a considerable challenge. The call to examine habits of thought, demystify prices and explain how the very strengths of the market can lead us in directions we do not want to go is contrary to the way economics is usually done. Yet, the profession

must change if there is to be any hope of liberating society from a destructively unbalanced social articulation. The change will be difficult for the economist and layperson alike:

> The emancipation of belief is the most formidable of the task of reform and the one on which all else depends. It is formidable because power that is based on belief is uniquely authoritarian; when fully effective, it excludes by its nature the thought that would weaken its grasp (Galbraith 1973, 223).

The economics profession can be an instrument of emancipation, rather than a perpetuator of delusion, by shifting the emphasis of economic research and teaching. Research agendas need to be more open to a dialectical approach to inquiry that seeks to identify systemic sources of delusion (for example, see Heilbroner 1980, 49). In the area of teaching, the principles of economics must give equal consideration to the market's shortcomings and its many positive qualities. This should not be limited to traditional market failures like monopoly power and externalities. It must include a survey of the many desirable things systematically selected against by the market. A discussion of these imbalances must be fully integrated into the economics curriculum and not relegated to end-of-the-semester digressions on special topics.

One way of guarding against the encroachment of the market is to protect, and expand, the domain of rights. "Rights can be viewed as protection against the market domination that would rise if everything could be bought and sold for money" (Okun 1975, 12). Arthur Okun, like his teacher Karl Polanyi, values the plurality and diversity of human motives and interests. The danger is this plurality can be crushed by the tyranny of the market. "The imperialism of the market's valuation accounts for its contribution, and for its threat to other institutions. It can destroy every other value in sight" (13). Consistent with the emphasis of this study, Okun emphasizes the market's strengths can be deleterious to society if not carefully balanced. "Society needs to keep the market in its place. The

domain of rights is part of the checks and balances on the market designed to preserve values that are not denominated in dollars" (13). The problem, of course, is that "The marketplace transgresses on virtually every right" (22). A democratic voice, and equality before the law are just two examples where more money helps guarantee greater rights. Recognition of the role of rights in promoting balance demands these rights be protected from commoditization. Campaign reform, to restrict the importance of money in the electoral process, is one example of a policy change that would protect the domain of rights.

Similarly, Korten points to diversity as necessary for both civilization and evolution (1995, 268-269). This diversity is threatened by the corporate-driven homogenization of the planet. Korten is especially concerned by the encroachment of giant multinational corporations into the domain of rights. Wealth can buy rights, if we are not careful, and nobody has more wealth than corporations. Korten points out that the extension of rights to corporations turns the purpose of individual human rights on its head (1995). Free speech, for example, cannot be an excuse for allowing corporations to dominate the electoral process. Extending this right to corporations that effectively have unlimited wealth and no ties of citizenship, destroys individuals' access to important rights such as free speech, fair elections, and a healthy environment.

Imbalances in social articulation also suggest policy alternatives. Folbre, for example, calls on society to "defend family values against the coercive effects of self interest" and to "Aim for a kinder and wiser form of economic development" by "Calling attention to the things money can't buy" (Folbre 2001, 231-2). Accordingly, she points to the need to be able to "measure our success by the improvement of our capabilities, the flourishing of our families, and the health of our environment" (Folbre 2001, 232).

Additionally, paying greater attention to caregiving in our economy would be an important step in correcting the imbalances of CSA. As modern life becomes increasingly commoditized, many of the important tasks once performed by family and community have now become commercial transactions, governed by the market rather than by ties of kinship and reciprocity. In fact, employment in nurture professions like education and healthcare now accounts for one-fifth of the total paid labor force (Folbre 2001, 55). "Hospitals and schools should now account as much in forming our image of wage employment as factories and construction sites" (55). However, the qualitative nature of these industries makes their product harder to quantify and articulate than housing starts or car sales. Despite the growing importance of commercial care, paying adequate attention to caregiving also requires estimating and reporting the importance of care services provided, as they historically have been, in the informal sector. In both the formal and informal sectors, the majority of this work is done by women. Important as they are, these services are undervalued because they do not conform well to CSA—they are not about excluding, individualism, or materialism, for example. Currently, the provision of many of these services rests on an ecotonal effect. Both the services and the service providers rest partly, and sometimes entirely, outside the commercial sphere. Industry benefits from a healthy, emotionally stable, and highly skilled workforce/consumerforce without having to pay compensation for its full value. Improved articulation of the value of care is necessary to provide more balanced levels of market involvement and to ensure the provisioning of care is sustainable and equitable. Improved articulation will also help coordinate care so that its provision no longer depends on the exploitative opportunities of the CSA /non-CSA ecotone (see, *e.g.*, Folbre 2001).

At the very least, actions that exacerbate existing imbalances should be strongly discouraged. The most obvious example is the yearly $620 billion spent worldwide on advertising, packaging, and point-of-sale-promotions (Korten 1995, 152). Even without concerns for social imbalance, neoclassical assumptions of consumer sovereignty and unlimited wants place advertising on highly questionable ground. Current tax policy effectively subsidizes advertising by allowing it to be treated as an ordinary cost of business. To create greater balance, however, advertising should be taxed at a rate of one-hundred-percent, with and exclusion of, perhaps, the first $1000. The tax would help to prevent the further exacerbation of a bias towards individualism, dynamism, homogenization, acquisitiveness, materialism, invidious competition, commodification and scarcity. The exclusion would favor relatively small, local businesses thereby addressing further biases towards gigantism, globalization, and the concentration of economic power.

Finally, social articulation helps to clarify the proper notion of economic reasoning. Currently there is considerable confusion between pecuniary rational and economic reasons. The economic reasons for a policy must refer to the logic of the prevailing economic system. Currently if one asked, for example, about the economic reasons for a piece of environmental legislation, they would likely be wondering about the pecuniary costs and benefits. This has nothing at all to do with economic reasoning. The economic reasons for laws that protect children, families, or the environment is that the current economic system has a systemic bias that, if unchecked, will do great damage to these things. The pecuniary opportunity costs of a child's time is pretty low. Yet, we do not need to defer to cost benefit analysis before demanding that children not be exploited in sweatshops, sex shops, and coal mines. When the propensity of the market is contrary to socially desirable outcomes, there

is sufficient economic reason for interventionist policies. A fundamental element of economic reasoning must be inquiry into such propensities.

One important implication of the particular biases of CSA is that slowing commercial growth becomes a reason for, rather than against, particular economic policies. For example, asserting just one non-commercial priority would not only require curtailing growth but would also place greater demands on the state and the democratic process. As Galbratih argues:

> Cultivation of the aesthetic dimension accords a new and important role to the state.... Where there is conflict between industrial and aesthetic priorities, it is the state which must assert the aesthetic priority against the industrial need. Only the state can defend the landscape against powerlines, advertisers, lumbermen, coalminers and, on frequent occasions, its own highwaymen. Only it can rule that some patterns of consumption—the automobile in the downtown areas of the modern city is a prominent example—are inconsistent with community goals. The state alone can protect radio and television from contrived dissonance—or provide alternatives that are exempt. And were aesthetic priorities asserted, the state would be required to come to its defense not, as now, episodically and in response to some exceptional outrage of aesthetic sensibilities. It would have to do so normally and naturally as the defender of goals in which aesthetic considerations were consistently important. Such goals it must be added, will not occasionally but usually achieved at some cost to industrial expansion—to economic growth. That one must pause to affirm that beauty is worth the sacrifice of some increase in the Gross National Product shows how effectively our beliefs have been accommodated to the needs of the planning system (1967, 317).

The tremendous imbalance that exists in CSA suggests that it should not require "some exceptional outrage" before we move to correct the problem. It further suggests that foregone commercial growth is precisely the type of move towards balance that we are seeking.

The Economic Ecotone

The concept of economic ecotones has uses beyond examining the social creation of scarcity. The concept, we have seen, is useful in economic anthropology and economic geography. It could readily be applied to a number of issues in urban and regional economics as well. More generally, ecotones provide a conceptual framework for examining the interactions between two different systems. As such, ecotones might prove useful in examining market structures and looking at the interactions between competitive and non-competitive sectors. It may be useful, to offer a final example, in development economics in exploring the interaction between the formal and informal sectors of the economy.

Ecotones fit well in the institutionalists' efforts to make economics an evolutionary science more closely resembling biology than physics. Because the ecotone is fundamentally about the qualitative differences between two domains, it compels us to examine their institutional structure. The study of power, structure, and dynamic interactions will likely prove more fruitful than the study of epiphenomena such as prices.

Ecotones can also help guide economic inquiry. They provide a locus of activity that should draw the attention of economists. Additionally, they provide a means of shirking costs. Since the logic of both economics and of markets rests on weighing costs against benefits, the ability to identify circumstances where decision-makers can sidestep constraints and shift costs onto others is invaluable to economists. The concept of ecotones should prove helpful in this regard.

Breaking the Cycle of Scarcity

The real significance of social articulation and economic ecotones, however, is the way they combine to create a cycle of scarcity. Happily, scarcity is a cycle that can be broken. Dissatisfaction is the logical byproduct of industrial capitalism and CSA. The cycle feeds upon itself when society returns to these instruments of scarcity to meet its yearnings. The results, while tragic, are not surprising, for the root of the problem and the framework for solving problems are the same. The more CSA fails us the more doggedly we cling to it. This feedback loop is the source of frustration, but also offers hope. A loop in reverse is still a loop. The more we restrict commercial colonization, the less residual scarcity we will have, and less urgency will be placed on CSA. As Korten describes the process, "Forced to examine who we are...we find a beautiful truth. Whereas our pursuit of material abundance has created material scarcity, our pursuit of life may bring a new sense of social, spiritual, and even material abundance" (1995, 267).

Social cycles require social polices to break them. In this case, with the full might of capitalism driving the cycle and the social and environmental consequences so severe, a substantial and aggressive change in policy is necessary. The United States should immediately adopt, and implement as quickly as prudence will allow, a thirty-hour workweek. Additionally, after this change has been implemented, US law should require reducing the workweek by two hours every decade for at least five decades. The initial sharp reduction in the workweek would help redress over six decades' worth of imbalance. There is perhaps no clearer proof of the imbalance in social articulation than the fact that it has been over sixty years since the workweek was last reduced.

The forty-hour workweek was implemented by the Fair Labor Standards Act of 1938. The modern world as we know it was largely created after that act. Jet travel, interstate highways, computers, digital communications, satellites are only a few of the many changes that have occurred. There has been an explosion in technology in agriculture, engineering, chemistry, genetics, robotics, and countless other fields. Yet, none of this has afforded adults more time to spend enjoying family and friends or participating in their communities. To the contrary, the primary development in the workforce since the Fair Labor Standards Act has been a sharp rise in workforce participation by women. In a balanced society, the commercial gains from technology and greater workforce participation would be balanced by an increase in the time spent in the social economy.

Some will object that a shorter workweek would be catastrophic to GDP. Certainly, some changes, like a higher minimum wage and lower taxes on the poor, would be necessary to ensure the poor could support themselves while working fewer hours. Yet, GDP should not be confused with social welfare. A shorter workweek is fundamentally about correcting an imbalance and freeing up resources, especially people so that they may put themselves to better use. "It is instructive to remember," argues Korten, "that until the last ten to twenty years, most people served society in unpaid work in the social economy. In many instances, these societies had a stronger social fabric and offered their members a greater sense of personal security and fulfillment than does our own" (1995, 290). As long as our focus is on utility and not commodities, the need for change is obvious. Leisure, community involvement, family participation all make real, substantial, and enduring contributions to welfare. They are also all systematically selected against by CSA. A

shorter workweek allows the technological dividend for providing individuals with more of many of the very best sources of happiness.

Continuing to reduce the workweek may seem like an attempt to move towards the sustainability of a steady state. In reality, the gradual reduction of the workweek to twenty hours would only be a minor help in reducing the environmental impact of the economy's growth—delaying the attainment of a particular level of RGDP by only two or three decades. The real significance would be ensuring, through deliberate action, that some of the gains in productivity would be used to buy leisure, family time, and civic time. In addition, it would place more of a competitive burden on newly created commodities, helping to combat the extensive commoditization of life. Currently, new commodities can to a large degree, be appended to the consumer's basket of goods. Increased productivity, long hours and dual-earner households have allowed washers, dryers, VCRs, TVs, computers and countless other goods to be added to the common household's possessions without the sacrifice of some other commodity. Certainly, many products never make it, but many of those that do can enjoy being part of a new, longer list of needs.

It is Say's Law run amok. New goods help expand the economy enough so their purchase need not require the sacrifice of other commodities. The sacrifice occurs outside the commercial sphere, beyond the realm of easily articulated values. One need not choose between a pasta maker, bread machine, and espresso machine; one can aspire to have them all.

In the modern era of globalization, establishing balanced societies will require international cooperation. Reform simply will not work politically if responsible action is punished in international markets. "What corporate libertarians call 'becoming more

globally competitive' is more accurately described as a race to the bottom." (Korten 1995, 229). When, as is often the case, competitiveness, interferes with protecting society and the environment from commercial biases, these protective measures need multilateral implementation. An important step in this direction, from which the Bush administration has now taken a step back, is the Kyoto agreement on greenhouse emissions. In general, the whole notion of trade talks needs to be reversed from efforts to free up trade to a cooperative effort to protect humanity and the environment form the excesses of the market and the imbalances of CSA. This is not to argue that international commerce has no place. Specialization, for example, can help to conserve resources. Commercial interests have also proven to be a strong weapon against the authoritarianism of many states. The choice is not all or none. The purpose of balancing CSA is to direct the economy back into the service of humanity rather than have humanity serve the demands of commerce. The very fact that high-level trade talks are so frequent shows that expanding the global commercial sphere is a lot of hard work and that balanced limits are possible if policy makers recognize the biases of CSA.

Friedman (1999, 10), for example, mentions how adopting a shorter workweek in France was too burdensome to their global competitiveness. The suggestion, made here, of reducing the workweek should be front and center in trade talks among the G7 and elsewhere. With a new orientation towards such discussions, one can easily imagine how a shorter workweek would complement a new treaty on greenhouse emissions. Similarly, such trade talks should have as their primary orientation a desire to reach agreements on polices that would, among other things, protect children, safeguard informal economies, establish minimum wages, ensure workers rights, protect biodiversity, and encourage local

autonomy. In short, trade talks should focus on creating a system of global commerce that allows individuals, communities, and nations to protect themselves, to the greatest extent feasible, from the deleterious effects of the market.

In the long run, this question of balance must focus on how to spend our technology dividend. It is possible to move towards Godwin and Condorcet's visions of balanced development if we create explicit policies to claim such progress. The economic propensity is to use the entire technological dividend for the increased production of commodities. It can, however, be used for expanding public education or greater equality, safety, and leisure; it could be invested in healthier families, communities and a healthier environment. To a substantial degree, the economy can be as good as we choose to make it. Laws which shorten the workweek, redistribute income, or promote safety and environmental concerns not only ensure that part of society's productivity affords us these valuable non-commodities, but also redirects competition so that there is more competition among commodities. This increased competition among things that are on an equal footing, with regard to social articulation, helps ensure the victor generates real gains in social welfare.

Reclaiming Utility

It is time to liberate our thinking, and ourselves, from the tyranny of scarcity. By focusing to much on external constraints rather then internal susceptibilities, we run the danger of making a mistake similar to those of the great classical economists like Smith, Malthus, and Ricardo. Condemning the "complete lack of imagination" of their economic vision, Schumpeter points out "Vast possibilities matured into realities under their very eyes. Nevertheless, they saw nothing but cramped economies, struggling with ever-decreasing success for their daily bread" (1954, 571). Today we recognize the enormous and expanding

possibility of producing commodities. What is often ignored are the vast possibilities of a free and affluent people turning inward and finding happiness in nature, family, friends, and self.

This book has argued that the continued emphasis on commodity production is deleterious to social welfare. This is possible because commercial articulation tips the scale towards commodities so that the full opportunity cost of their production is not considered. At the same time, institutional ecotones allow much of the cost of commercial activity to be shifted outside the commercial realm. The problem created by both biased social articulation and ecotones is a lack of balance. A genuine concern for utility demands restoring balance by being receptive to all sources of utility. Economics has lost sight of utility as its guiding principle. While the concept is nominally considered a normative goal, the pursuit of happiness has largely been confused with the pursuit of increased production.

Certainly, commercial growth can elevate welfare, but the two concepts are not synonymous. It makes no sense for a discipline to assume a goal, welfare, and the primary means of achieving that goal, growth. Economics claim of both growth and welfare as normative goals is a dangerous sign of scientific failure. "The ancient preoccupations of economic life—with equality, security, and productivity—have now," argues Galbraith, "narrowed down to a preoccupation with productivity and production" (1958, 95). He continues:

> Production has become the solvent of the tensions once associated with inequality, and it has become the indispensable remedy for discomforts, anxieties and privations associated with economic insecurity....supported ...by an elaborately synthetic reinforcement, it has managed at least superficially to retain the prestige which inevitably it had in the poor world of Ricardo (1958, 95).

Once the means and the ends are assumed, all that is left is rationalization. That is, of course, fundamentally contrary to the spirit of science. In a society of modest means, production and welfare, while still not synonymous, are tightly linked. The biases inherent in CSA and industrial production helped perpetuate the illusion that rising production and rising welfare are, in all societies, indistinguishable and inseparable. However, the purpose of science is to challenge, not embrace, illusion.

A renewed emphasis on utility would demand several reforms for the economics profession. First, economists cannot arbitrarily limit their sights on one means of social provisioning—the market. They should in every instance seek to determine the best, not the most conventional, means of social provisioning. Second, they must likewise be aggressive about inquiring into all sources of utility, not just commodities. A genuine concern for utility would also prompt inquiry into the biases of the prevailing modes of production and social articulation. Correcting these flaws is important for promoting balance and ensuring all sources utility are utilized. Third, new indicators of economic welfare need to be developed (see, e.g., Folbre 2001, 53-80). These measures should explicitly try to track happiness trends and do a better job addressing the non-market benefits (like childcare and other aspects of social reproduction) and material costs (like pollution and unsustainable resource consumption) of economic activity.

A New Ethic?

There are those who argue society needs a new ethic. Environmentalists frequently makes such claims. Feminists and others, who correctly observe that the current socioeconomic system is not equally favorable to all groups and all values, also point to the need for a new ethic. It is likely that society would benefit from a new ethic that better

valued women, diversity, and the environment. However, this book has shown that, to a shocking degree, our actions are governed by habits and other institutions, not by ethics. Certainly, we should not be surprised if a majority of people claim to value children more than money, or if family values and strong communities were rated more favorably than materialism. Even a healthy, beautiful, and diverse environment is likely to get higher marks than selfishness, gluttony, and avarice. The problem is our economy and our daily lives are structured as if the reverse were true. Ethics or not, an individual cannot steer the logic and dictates of the market:

> There are few rights more fundamental than the right of people to create caring, sustainable communities and to control their own resources, economies, and means of livelihood. These rights in turn depend on the right to choose what cultural values they will embrace, what values their children will be taught, and with whom they will trade. A globalized economy denies these rights by transferring the power to make the relevant choices to global corporations and financial institutions (Korten 1995, 307).

As grim as Korten's diagnosis is, the locus of power is only part of the problem. Certainly, globalization and the rise of producer sovereignty have done enormous damage to the autonomy of individuals, families, and communities. More than this, however, is the fact that any remaining autonomy will be shaped by CSA and exercised within the context of a global market economy. Thus, the straightforward desire to educate children manifests itself in the convoluted and asinine actions of having to buy candy bars and magazine subscriptions, collect box-tops and labels, or tolerate advertising for junk-food an other paraphernalia inside the classroom. Similarly, there is the illusion of logic behind the notion that the only way to save rainforests, which have stood for aeons, is to discover their hidden commercial value. The biases and, just as important, the limits of CSA, must be addressed

if the imbalances of commerce and globalization are to be corrected, and until we correct these biases, a new ethic will be superfluous.

Conclusion

Where does this leave us? How do we balance ethics against the biases of CSA and the global economy? Stating both explicitly is an important first step. The only sensible way of approaching social provisioning is to clearly express the values and goals of society explicitly, and aggressively identify the inherent biases of the current socioeconomic system. The next step is to create the policies and institutions that will correct and augment the latter in order to achieve the former. The work of philosophers, and others, to clarify and expand our ethical obligations is invaluable to economists. So too is the work of ecologists and other scientists. The insights they provide continually refocus the real economic problem. Once economics is seen as perfecting social provisioning rather than engineering efficient markets, the task becomes creating a variety of institutions that will accommodate the full range of human capacities and desires while complying with our best understanding of science and ethics.

In the end, dissatisfaction in the midst of unparalleled affluence is not a paradox at all. Rather, it is the natural result of a preoccupation with a very narrow conception of prosperity. As humans, we are capable of great happiness, sophistication, intelligence, and strong idiosyncrasies. The environment in which we live, though faced with rampant destruction and wholesale extinction, is exceedingly wonderful and complex. Similarly, society can be as stimulating, uplifting, nurturing, diverse, and happy as we endeavor to make it. First, however, we will do well to acknowledge the nested complexities that make

up the human condition. We should not bind ourselves in the narrow constraints of commercialism. Rather, social provisioning requires balance, breadth, and openness. We, like Mill, must cultivate all our susceptibilities, that we may embrace the widest range of happiness.

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