Consequences: The Debt–Growth–Inequality Nexus

Nowadays, economic growth is heralded as the ultimate goal by so many governments. To an extent, this goal is forced upon society as it struggles to meet the interest charges on its debt. Whilst debt grows at compound interest towards infinity, in the physical world everything depreciates towards zero. I propose that the price we shall all pay for running this unwinnable race against compound interest is a polluted and depleted world. (Tarek El Diwany 1997: 189)

Over 300 years ago, as we've detailed, a country the size of the state of Minnesota or half the size of Papua New Guinea embarked on a financial experiment dictated largely by debts accrued in war that arguably succeeded in making it the richest and most powerful country in the world. Dozens of other countries tried to emulate its success with varying degrees of success and failure. But by granting the right to the Bank of England to print and issue money as debt, the Government of Britain delivered to them the equivalent of the philosopher's stone, enabling private citizens to create wealth with the stroke of a pen. Some 321 years later we are in a position to evaluate the consequences of that experiment. It is certainly true that the financial system that evolved out of that beginning has created, for some, great wealth and numerous technological marvels. The human life span has been extended and cures for disease and illness realized for considerable portions of the global population. We can only speculate how history would have changed if, for example, the Government of England had reserved the right to issue money to itself, and had other countries, such as the United States, later followed suit.

Regardless, issuing money as debt, as we have described above, not only creates hardships for individuals and countries unable to service or pay off their debts. We have tried to take that a little further and outline how debt is central to the global political economy as it has evolved since the fundamental institutional innovation of the Bank of England. As we have illustrated, it has been used as a means of expropriation of resources, a mode of discipline and market subjectification, and an instrument of control (Schild 2000).

Furthermore, for debt to be maintained and extended as a technology of power requires, as we noted earlier, perpetual and exponential economic growth. It is not incorrect to say that the requirement for growth arose simultaneously with the creation of a national debt, for without growth (or rapid inflation), the interest and/or dividend paid to debt holders could never be realized (Ferguson 2001: 140). Throughout history there have been periodic financial collapses when the necessary return to creditors was not forthcoming (Kindleberger and Aliber 2005; Reinhart and Rogoff 2009). Indeed, the current crisis in the Eurozone is attributable to fears of default related to the prospects for economic growth in some European countries.

Without perpetual and exponential growth, in other words, a debt-based monetary system cannot be sustained; furthermore, the rate of growth experienced over the past three centuries could not have been maintained without the fortuitous availability of affordable energy, first in the form of coal and then in the form of oil and gas.

In sum, we suggest that the ownership, production, and allocation of “capitalist credit money” creates a particular form of political economy that requires perpetual economic growth under the logic of differential accumulation, along with the availability of affordable fossil fuels to drive the necessary systems of production and consumption. We claim that this system is not natural and inevitable but a historical creation intertwined with the power of the 1%—of whom, owners and managers of financial institutions are the most important. We see the pursuit of this logic as leading toward what Polanyi called a “stark utopia”—a general situation of increasing austerity and hardship

for ordinary families and ever-greater environmental despoliation. However, unlike Polanyi, we do not understand the emergence of this “stark utopia” as being generated by belief in “self-adjusting markets” but fundamentally rooted in our debt-based money system capitalized and owned by the few. Moreover, given the precarious state of existence for many, mounting and variegated expulsions from society, and despoiled or newly barren environments in many parts of the globe, we can already start to identify what might be called a geography of “stark utopias” (Bauman 2004; Davis 2007; Standing 2011; Sassen 2014). Being the children of the oil age, neoliberals claim that growth is the source of all well-being and assume the growth logic as self-evidently desirous. However, their general confusion over the monetary system, a child-like belief in “free markets,” and their outlandish conviction in limitless growth lead them to ignore how debt serves as a technology of dispossession and private accumulation. This is an ongoing process that produces an ever-greater centralization of power as well as mounting environmental harm in spite of neoliberal incantations to the contrary that growth will promote individual freedoms and greater well-being.

In the remainder of this chapter, we will argue that we cannot fully evaluate the results of the debt-money experiment without considering our environmental decline, growing differential power and economic inequality, and a host of other social problems that stem from the debt-driven requirement for perpetual economic growth that is, in turn, made possible only by the availability of affordable energy. We will first examine briefly the history of the growth paradigm and the dilemmas that it poses. Then we will examine why maintaining the necessary rate of growth becomes more difficult, and why it necessitates yet more debt and the continuing acceleration of environmental degradation and differential power accumulation. Then, we will reconsider Thomas Piketty’s (2014) work by examining the acceleration of differential power or inequality in light of our analysis of debt as a technology of power. More specifically, we will extend our analysis from the previous chapter on the role of debt in wealth transfer. Finally, we want to suggest the difficulties of changing our present environmental, political, and social

trajectories within the existing political economy by briefly examining the question of who controls the future of food and energy.

A brief history of perpetual growth

As mentioned above, the prime assumption of neoliberal economists, policy makers, and politicians is that *perpetual economic growth, as measured by gross national product (GNP), is the source of all well-being and progress* (see Korten 1995: 70).¹ As Michel Foucault put it, for neoliberalism “there is only one true and fundamental social policy: economic growth” (Foucault 2004: 144; see also Gellner 1983; O’Connor 1998). Embedded in this logic is the assumption that we live in a world in which it is possible to expand our economies *ad infinitum*, and that, as Igoe and Brockington put it, “the world is a pie that can grow bigger and bigger until everyone can have a piece” (2007: 434; see also Arndt 1978: 143–144).

The computation of growth as “gross national product” was developed in the United States by Simon Kuznets and associates during the Great Depression (Fioramonti 2013: 23). With the memory of the 1930s depression fresh, leading economists such as John Maynard Keynes suggested that full employment was possible only in conditions of steady growth (Arndt 1978: 35). W. Arthur Lewis (1955: 420–421), in his classic work, *The Theory of Economic Growth*, suggested that growth would solve the problems of inflation and the balance of payments, promote greater economic equality, and provide greater control of the environment. Economic growth, some claimed, would even increase levels of happiness. As Paul Samuelson (1964: 778) suggested in the sixth edition of his famous text, *Economics*, while material goods are not themselves important, a society is happier when growing and not stagnating. Benjamin Friedman (2005) argues that economic growth fosters greater opportunity, tolerance of diversity, social mobility, commitment to fairness, and dedication to democracy; in other words, more money makes people more moral.²

Concerns about economic growth and its formal computation intensified after the Second World War and is perhaps now the world's largest religion (Hamilton 2004).³ This religion is rationalized by the proposed benefits that include, among others things, increased national security, full employment, greater social and economic equality, increased social mobility, the economic development of the Third World, the growth of democracy, and greater happiness.⁴ This is why during the Global Financial Crisis the solution was to chase more growth. As the editorial board of the *Financial Times* (2009) spelled out in its “survival plan for global capitalism,”

There is one certainty. While recessions are inevitable, deep depressions or slumps—or whatever you call them—are neither necessary nor welcome. They destroy wealth, sap happiness and crush old certainties. What is more, increasing poverty is a grave threat to world stability and democracy. Revolutions often start as bread riots, and economically-stagnant countries make belligerent neighbours. Growth must be restarted.

Regardless of the origins of the need for perpetual growth and the ideology required to sustain it, one cannot argue that historically the goal has not met with remarkable success. As Angus Maddison (2001) documents in his monumental work, *The World Economy: A Millennial Perspective*, economic growth was virtually absent until the nineteenth century, when it surged in the era of abundant, affordable, and relatively accessible fossil fuels (Smil 1994; Goldstone 2002; Wrigley 2010) (see Figure 4.1).

Currently global GDP is over \$70 trillion and has grown at an annual rate of about 2.5 percent since 1750. Since 2000, the rate of growth has been about 3 percent, which is the minimum that economists consider necessary for a “healthy” economy.

Of course, the drive to growth also led to unprecedented global competition for resources, two world wars, hundreds of smaller-scale conflicts, and the expenditure of untold lives and wealth, not to mention mountains of debt at different scales of global society. Yet

Figure 4.1 Rate of per capita GDP growth from 0 to 1998 AD by regions

Source: Adapted from Maddison, Angus (2001) *The World Economy: A Millennial Perspective* (Paris: Development Centre of the Organization for Economic Co-operation and Development).

the assumption that growth could solve socioeconomic and political problems persisted and ultimately became the main policy objective of virtually every country in the world as the system of national accounts and the discourse of “development” was institutionalized in the United Nations at the end of the Second World War (Rist 2008; Fioramonti 2013: 32).⁵

Other than the separation of economics from politics and the mathematization of the economy as a distinct sphere of “formal” study, the insistence on perpetual growth is the key belief that distinguishes classical economic theory from its neoliberal variant. Classic economists such as Adam Smith, John Stuart Mill, John Maynard Keynes, and, more recently, Amartya Sen did not envision perpetual economic growth as a specific policy goal. They saw political economy and later economics providing the tools for economies to grow to a certain point as organisms do in nature, and then, when people could, in Keynes words, live “wisely, agreeably and well,” growth would level off (see Jackson 2009: 41–42; Skidelsky 2009: xvii).

There is of course little doubt that some degree of economic growth for a given time period may have positive social benefits. However, there are major problems with pursuing economic growth for its

own sake in perpetuity.⁶ First, the computation is merely an adding up of economic transactions in the economy. What this means is that things that actually harm society—like car accidents, more disease, oil spills, and so on—are actually added to GDP. Second, economic growth tells us very little about how the potential benefits and harms of our transactions are distributed across and between societies. Moreover, it is difficult to justify empirically whether perpetual growth, the keystone of neoliberal logic, has delivered on its claims. If we go back only to 1950, the global economy has expanded more than six-fold (see Maddison 2001: 125). Surely with that much growth, we should have seen considerable improvement in the promised social, economic, environmental, and political gains. Yet nationally and internationally we are more unequal than ever (see, e.g., Noah 2012; Stiglitz 2012; Dorling 2014; Johnston 2014; Di Muzio 2015); in the United States alone, one in five children still lives in poverty; instead of increasing, social mobility is decreasing (Bradbury 2011); most developing countries are so heavily in debt that funds that should go to build roads, hospitals, schools, and public health facilities and to reduce poverty are flowing into Western banks and financial institutions just to service the interest on the debts. World expenditure on armaments has increased by 50 percent since 2001 alone (Shah 2012), so it is difficult to make the case that growth has led to greater national security. Politically our institutions are increasingly dominated by large corporations and financial institutions. Moreover, as Bill McKibben (2007) points out, while in 1946, the United States was the happiest country among four advanced economies, thirty years later it declined to being ranked eighth among eleven advanced countries, and a decade later it ranked tenth among twenty-three countries, which include countries from the developing world. Furthermore, there is a steady decline in the percentage of Americans who claim their marriages are happy, are satisfied with their jobs, or find pleasure in the place they live. In fact, overall in the United States, there has been a dramatic drop in social capital, that is, relations of cooperation, reciprocity, and trust (Putnam 2000).

While neoliberal economists generally accept a view of the world whereby problems can be solved through the perpetual growth of the economy, there have been periodic dissenters within the field of economics, skeptical of the benefits of rampant economic growth (Mishan 1967; Scitovsky 1976). The most renown is perhaps Herman Daly.

In 1996, Daly, a former economist with the World Bank, published his seminal work, *Beyond Growth: The Economics of Sustainable Development*. He not only argued that growth was unsustainable, but that it was doing irreparable harm to our societies, as well as our environments, and that GDP, then at just over \$9 trillion in the United States, was an irresponsible way to measure the progress of a society.

Yet by 2014 US GDP was almost \$17 trillion, or seventeen times greater than it was in 1967 and eight times greater than it was in 1976. Global GDP stood at about \$70 trillion, over twenty times what it was in 1967, and almost twice the size it was when Daly issued his warning. In fact, if the US economy grew at the minimum desired rate of 3 percent real GDP growth a year⁷ (close to the growth rate of Japan from 1900 to 2000), in 2100 the GDP, that is what US citizens are consuming and producing, would be over \$200 trillion, or 600 times what they spent and produced in 1950! And since some emerging nations tend to grow at higher rates than wealthy nations, global GDP could *theoretically* approach or exceed a quadrillion dollars.⁸

While neoliberal economists assume that more growth is better, it is impossible to conceive of the effects of a quadrillion dollar global economy on the world's ecosystems, even if it was possible, let alone their societies. As John Magnus Speth (2008: x) argues, even if our economic output remained at its *present* level, the world would be virtually uninhabitable by the end of this century. The damage that has been and is being done is well documented by J. R. McNeill (2000), among many others, and illustrated pictorially by Will Steffen et al. (2004: 132–134) and his associates in the series of charts detailing the exponential environmental effects of economic growth (see Figure 4.2).⁹

Figure 4.2 Rates of resource extraction and environmental change

Source: Adapted from Steffen, W., et al. (2004) *Global Change and the Earth System: A Planet under Pressure* (New York: Springer): 132–133.

Even environmental economists are hard-pressed to come up with a scenario in which it would be possible to maintain growth and yet limit environmental destruction. Tim Jackson, economics commissioner on the UK Sustainable Development Commission, notes that “...there is as yet no credible, socially just, ecologically sustainable scenario of continually growing income for a world of 9 billion people.” Furthermore,

Resource efficiency, renewable energy and reductions in material throughput all have a vital role to play in ensuring the sustainability of economic activity. But the analysis...suggests that it is entirely fanciful to suppose that deep emission and resource cuts can be achieved without confronting the structure of market economies. (Jackson 2009: 86)

Jackson is one of the few environmental economists examining the impact of economic growth on the environment, who recognizes that slowing or stopping growth will itself lead to economic disaster; that is, while continued growth will destroy the environment, stopping or slowing it will destroy the economic foundations of our societies. He concludes,

Taking a step back for a moment, there are only two ways out of [the dilemma of growth]. One is to make growth sustainable, the other is to make de-growth stable. Anything else invites either economic or ecological collapse. (Jackson 2009: 128)

But there is another problem that is equally, if not more, sobering: *as economies generate more debt and material goods, as they grow wealthier, it becomes more and more difficult for them to sustain growth.* Economists inexplicably call this the “convergence factor,” noting that developing countries, which are able to maintain higher growth rates, will “converge” to the growth rate of advanced economies (Jones 2002: 63ff; Barro and Xavier Sala-i-Martin 2004: 462–463). But this makes little sense as an explanation for differential growth rates; more accurately, the reason has to do with the nature of exponential growth.

From the investment side, maintaining a compound rate of growth, as David Harvey (2010: 216) notes, requires money managers to find more and more profitable investment opportunities. Currently there is almost \$100 trillion controlled by institutional investors in pensions and insurance alone, an amount that has more than doubled since 2000 (OECD 2014: 7, 9). In physical terms, as Harvey puts it,

When capitalism was made up of activity within a fifty-mile radius around Manchester and Birmingham in England and a few other

hotspots in 1750, then seemingly endless capital accumulation at a compound rate of 3 percent posed no big problem. But right now think of endless compound growth in relation not only to everything that is going on in North America, Oceania and Europe, but also east and south-east Asia as well as much of India and the Middle East, Latin America and significant areas of Africa. The task of keeping capitalism going at this compound rate is nothing if not daunting. (Harvey 2010: 27–28)

Harvey (2010: 28) notes that the wave of privatizations that is so central to neoliberal policy prescriptions is less about the unproven increases in efficiency and more about finding places to invest money and keep it working and growing. Furthermore, finding an exponential increase in places to grow money requires greater and greater risk, as the subprime mortgage fiasco proved.

To illustrate further the difficulty of maintaining growth, from the resource extraction side, from 1990 to 1995 the lumber industry in the United States maintained a growth rate over that period of about 3.5 percent by cutting down the equivalent of one and a half million more trees than they had in the previous five-year period. However, in order to maintain the same 3.5 percent growth rate from 2005 to 2010, they would have had to cut down the equivalent of two and a half million more trees (Howard 2007). Extrapolate those growth figures to automobiles, fish stocks, water usage, and so on, and the near impossibility of sustaining exponential growth becomes more easily apparent.

While we cannot elaborate further here, another significant consequence of the difficulty of growth maintenance is that the time spent and the processes used to maintain growth must accelerate; everything has to move faster.¹⁰ Money has to flow faster, people have to work faster, and even our food crops and animals have to grow faster; by using growth hormones, antibiotics, and feed lots, for example, beef cattle now reach slaughter weight in fourteen months, instead of a natural three to four years (see Robbins 2005; Pollan 2007). Time becomes an enemy to be overcome (Gleick 2000).

We can conceptualize the difficulty of maintaining exponential growth, also, by remembering that capitalization is a claim on expected future earnings and that these earnings are contingent not only on the power of firms and certain government organs but also on the ability to commodify various aspects of the natural and social world. Furthermore, the transformation of the natural world into money and earnings requires energy, which is also beginning to approach limits and has severe consequences for the biosphere and human and natural life (Heinberg 2003; Rockström 2009; IPCC 2014). Chris Martenson (2011: 150) estimates that each 1 percent of economic growth requires a 0.27 percent increase in petroleum production; at a 4 percent growth rate, the world would need to increase the present 90 millions of barrels of oil a day to some 114 mbd by 2020. The problem is not necessarily with supply (although some estimates are that conventional oil is in decline), but with the environmental and monetary cost of retrieving what remains, including “unconventional” fossil fuels. In 1930 it took one barrel of oil to extract 100. By 1970, with oil more difficult to extract in certain regions, the ratio fell to 25:1; by the 1990s it was between 18:1 and 10:1. There may be lots of oil in tar sands or shale, but the ratio between usable energy and energy needed to extract it is about 3:1, 2:1, and, some argue, even less (Martenson 2011: 133ff).

Debt, growth, and austerity

When we consider statistics on debt, we have to remember that one person, corporation, or government’s debt is another entity’s asset. The financial sector runs on debt. That is their main product; and they market that product as aggressively as any other producer of goods and services. But unlike other products, which require labor and resources to create, financial assets are largely created by computer entries. And while we may marvel at the fact that a car can be built in eighteen hours, billions of dollars in financial assets can be created (or destroyed) in milliseconds.

This has one very significant implication: an economy operating with debt-money, and, therefore, one that requires perpetual and exponential growth, requires also the creation of evermore debt. But more debt, in turn, requires more growth to produce the required interest or dividend, and so the cycle continues. If at any point, the rate of growth is insufficient to produce the money required to pay debts, financial crisis inevitably ensues as credit collapses.

So while maintaining economic growth is not intrinsically good, particularly when weighed against the negative externalities it produces that include environmental devastation, the centralization of power, and dysfunctional social relations, growth (or, more accurately, capital accumulation) is necessary to ensure that the financial system does not freeze up or collapse and take the rest of the society with it. That is the price we pay and the dilemma we face for granting to private interests the right to issue money as interest-bearing debt.

Currently total global debt exceeds \$199 trillion or almost 300 percent of global GDP (Reddy 2013; Dobbs et al. 2015).¹¹ If we assumed that the average interest on the debt was 5 percent with a term of ten years, the global economy would have to produce over that period over \$50 trillion of new money in order to service all the interest. And that assumes that no new debt is issued, which is impossible in a debt-based monetary system. While we can only examine a few of the consequences of this process, we will focus, first, on how this plays out in loans to developing countries and, second, compare the process to some effects on domestic borrowers. Our major point here is that in a debt-based economy there can never be sufficient growth to honor all debt payments, and, furthermore, if growth accelerates, central banks will raise interest rates, not only increasing the need for growth to pay the additional interest, but paradoxically, making growth more difficult by reducing economic activity and job creation. Consequently, the money required for financial institutions to receive their needed return on capital must be realized elsewhere. In brief, what leading economists and banks call “austerity” is, in reality, a “taking” from others.

Odious debt

We noted earlier how, after the withdrawal of colonial powers, loans were extended to now nominally independent colonies as a means of discipline, market subjectification, and control. It is difficult to imagine how lending institutions, including the World Bank, could have assumed that there could ever be sufficient growth in those countries to produce the revenue to pay off the debts. Consider, only, that it required the control of the resources of over half the world, along with the control of a source of cheap energy for the wealthy countries of the world to maintain their necessary growth rate in the nineteenth and twentieth centuries, and it is easily apparent how absurd it was to expect colonial and ex-colonial countries to collectively grow sufficiently to pay off their debts. This is one among other reasons we can call it *odious debt*.

The term “odious debt” originates with the Russian jurist Alexander Sack and refers to a type of sovereign debt generally assumed by dictatorial regimes where the borrowed money did not benefit the citizenry (and is often used to repress them), where the citizenry did not consent to the debt, and where creditors had full knowledge of the situation (UNCTAD 2007; Bonilla 2011). In 1997, when Franjo Tudjman of Croatia eliminated political opponents and looted public funds, the IMF cut off lending to Croatia. But commercial banks, nevertheless, lent an additional \$2 billion to the Tudjman government until his death in 1999. While these loans benefited virtually no one but corrupt government officials and the banks that extended the loans, they, nevertheless, had to be repaid, usually by cutting funds for education, sanitation, health, and poverty reduction. Similar loans were made to the Apartheid government of South Africa, to dictators in Nigeria, Philippines, Nicaragua, Haiti, and much of Latin America, the financial burden of which is borne by the citizens of those countries, for which they not only received little if any benefit but with which many were imprisoned, tortured, and killed (Kremer and Jayachandran 2002; Ndikumana and Boyce 2011).

This pattern of too much money being invested in countries that could not possibly produce the revenue to honor the loans has been repeated all over the world over the past forty years, with everyone pointing the blame for the debt crisis at everyone else.

However, these sovereign debts represent a colossal failure of banking judgment, ignorance of economic theory, or more than likely, as we mentioned earlier, a cynical strategy for economic and political control. To put these loans and the conditionalities that have been imposed on most countries by the IMF in perspective, imagine yourself going to the bank for a loan to open a hardware store on Main Street. The bank, your only source of capital, extends the loan but sets these conditions: you must pay back the loan with currency having half the value of the amount you received, essentially doubling your debt burden, and, if you borrow any additional money, you must pay twice the interest rates of competitors. In addition, the bank supports a big box store down the road from you and extends loans to a dozen other people to open hardware stores on your block, with whom you must compete. That essentially is what happens to emerging economies as conditions of the loans they have received. Unable to attain growth rates necessary to repay the loans, they have been forced, first, to restructure by devaluing their currency, ostensibly to encourage exports and discourage imports. Then, to counter inflation, they must pay higher interest rates on loans, and they must compete with economic sectors of developed economies that possess far superior technologies and whose businesses have lower energy costs. If you have a cup of morning coffee, remember that there are over fifty coffee-exporting countries in the world, most trying to produce and sell as much coffee as possible to pay their external debts. But the glut of coffee on the market drives down prices, making it more difficult to attain the economic growth necessary to pay even the interest on the debt (Pendergrast 1999: 277ff; Tucker 2011; Robbins 2013).¹² What is true of coffee is true also of most commodities (e.g., lumber, beef, tea, etc.), driving up the profits of importers, but leaving exporting countries even further in debt.

To make matters worse, not only is there no provision, beyond default, for countries to declare bankruptcy but also unpayable sovereign debts are being purchased by hedge fund traders at a fraction of their face value from banks that have given up on collecting. These traders—dubbed “vulture capitalists” by Wall Street traders themselves—generally seek payment for the full face value of the debt by taking countries to court.

The default by Argentina in 2014, its second in thirty years, is instructive (Sassen 2014). First, it should be noted that Argentina’s external debt was accumulated by the military junta (1976–83) and, through the painstaking investigative work by Alejandro Olmos Gaona, was declared odious in Argentine court in 2000 (George 1988: 129–130; Naylor 1994: 142–149; Olmos Gaona 2001). When Argentina defaulted on its sovereign debt in 2001, Elliott Associates L.P., an investment firm headed by Paul Singer, purchased at a large discount, some \$48 million of unpaid debts. Singer demanded from Argentina the full value of the debt, which, when interest and fees were added, was valued at anywhere from \$1.5 billion to \$3 billion. Singer took Argentina to court to collect, and a US federal judge ruled in Singer’s favor, forcing Argentina to again default to avoid payment and throwing their economy into turmoil.¹³ Singer had pioneered these funds, when, in October 1995, Elliott Associates purchased some \$28.7 million of Panamanian sovereign debt for \$17.5 million from large banks such as Citi and Credit Suisse, which had given up on ever collecting. As was normal in situations where countries did not have enough to service their debt, the government of Panama asked bondholders to restructure the debt, by extending the time period or taking a lower payment. Most agreed, but not Elliott Associates; they demanded full repayment of the \$28.7 million plus interest and fees. Elliott filed a lawsuit against Panama in New York district court, and the case went all the way to the New York Supreme Court, which sided with Elliott. Panama had to pay the firm \$57 million, with an additional \$14 million going to other creditors.

Following Singer’s innovation, other funds were formed, such as Dart Container Corp and EM Ltd., both linked to Kenneth Dart, one of the

most famous names in the world of vulture funds, to purchase sovereign debt of other indebted countries and demand full payment of the debts.

The problem that has been raised has to do with the morality of these transactions. The money that is flowing to investors in these funds is money that is often being taken away from investments in education, health, and poverty alleviation in these countries (Palast 2014). Take the region of sub-Saharan Africa, for example. This region pays \$10 billion every year in debt service. That is about four times as much money as the countries in the region spend on health care and education.

However, lest we place too much blame on the likes of Paul Singer and Kenneth Dart, we must remember that most of these loans were issued by major banks, often with formal or informal assurances by the International Monetary Fund or World Bank that the loans could be repaid.

Domestic (odious?) debt

However, debt as a technology of power has not only been used in developing countries; it is a technique and pattern that is being applied in developed countries as well, and may be as odious as the debt foisted upon the developing world. The parallels between the use of debt to discipline, subjugate, and control other countries and the use of debt to control the citizens of so-called developed countries are striking.

As with global debt, debts of all kinds have been increasing dramatically in the United States, as well as in other countries of the world (see Figures 4.3 and 4.4).

Since the vast majority of money is released into the economy as capitalized money bearing interest to the owners and managers of banks, this means that one way to expand earnings is by expanding the pool of debtors. One of the major inventions here was the creation and development of the consumer and various types of consumer credit “products”—from credit cards and lines of credit to car and home-equity loans. The result has been a dramatic increase in consumer debt (see Figure 4.5).

Figure 4.3 US private and public debt as a percent of GDP, 1870–2012

Figure 4.4 Total private and public debt as a percent of GDP: major countries

The literature on this topic is too vast to cover in any depth here, but at least three broad trends can be identified (Gelpi and Julien-Labruyère 2000; Manning 2001; Montgomerie 2006; 2009; 2013; Sassatelli 2007; Burton 2008; Leonard 2011; Robbins 2014: Chapter 1; Soederberg 2014).

Figure 4.5 US consumer credit, 1968–2012 in \$millions

Source: see http://www.federalreserve.gov/releases/g19/hist/cc_hist_mt_flows.html

First, creating the consumer through advertising has not only increased in geographical scope since the organized capitalization of advertising firms but also deepened across a range of new and traditional media. One indication has been the yearly growth in advertising spending, now surpassing a half trillion dollars—higher than the GDP of 163 countries listed by the World Bank.¹⁴ This spending facilitates debt as a technology of power insofar as it is designed to produce forms of identity and subjectivity that often require access to consumer credit to achieve (Gill 1995). In a sense, advertisers have sold to consumers the same image of the good life that economic development advocates and lending agencies sold to citizens and politicians of the Third World.

Second, consumer credit instruments have globalized—albeit, extremely unevenly. One key example is the credit card industry, which views emerging economies as a key source of growth so long as consumer behavior can continue to be modified (Research and Markets; Global Credit Card Industry—Emerging Markets 2010). In China alone the market for credit cards grew by 13 percent in 2013 to 391 million cards, with Euromonitor predicting strong growth for plastic credit going forward (Waldmeir and Rabinovitch 2014).

Moreover, as wages have stagnated or fallen for the majority in mature economies, there has been an increasing reliance on consumer credit to finance necessities like food, medicine, and electricity—in part, what Soederberg calls “debtfarism” (2014). To be sure, some of this spending is on conspicuous consumption, but we must also recall that borrowers are not borrowing money that exists when they use bank products, but money created on computer screens. Furthermore, nonsecuritized loans account for \$62 trillion dollars (McKinsey Global Institute 2013)—the largest category of debt in the world—while the World Bank notes that household consumption represents about 60 percent of global GDP. Without debt-financed spending, then, there is little doubt that crises would ensue.

Third, there is a burgeoning industry growing up around the consumer debt revolution that includes debt-collecting agencies, debt counselors, credit-rating agencies, subprime debt traders, pawn shops, new technologies to monitor debtor whereabouts, and new punitive legal frameworks including the return of incarceration for unpaid debts (Gill and Roberts in Young et al. 2011; LeBaron and Roberts 2012; Corkery and Silver-Greenberg 2014).

The number of people whose debts have been referred to collection agencies is huge: some 35 percent of all people in the United States with credit records have, at one time or another, been reported to collection agencies with unpaid debts averaging \$5,178 (Boak 2014; Ratcliffe et al. 2014).

Whereas creditors in developed countries can launch into indebted countries their legal teams and, if necessary, their country’s military to enforce debt payments, domestic banks and other lending institutions can send in lawyers, judges, and police.

For example, in the United States there is a growing market for bad debt, that is, debt that is more than a few months in arrears. Investors buy “bad paper,” as it is called, at pennies on the dollar and then use every means, both legal and illegal, to collect.¹⁵ Jake Halpern (2014) describes the world of the debt collector, individuals and firms who buy debts from banks that the banks have not been able to collect.

Often they buy these debts for as low as 0.04 on the dollar, reaping huge profits in the process. By law, banks are not able to count as assets debts that are 180 days or more in arrears. Banks then “charge off” these debts and then “sell” them in bulk to collectors who then attempt to collect from the debtors. These buyers are the domestic equivalents of “vulture capitalists.”

The bad debt business really took off in the United States after the savings and loan crisis of the early 1990s, when the US government seized the assets of failed savings and loan institutions and auctioned off their unpaid loans. Debt buyers then call, threaten, and sue debtors to collect as much as they can. Halpern describes one portfolio of debt purchased by one bad paper collector for \$28,000, that brought in more than \$90,000 in six weeks, with the remaining unpaid loans then resold for \$31,000, and resulting in an almost 200 percent return on the initial investment (2014: 15). The bad paper market grew from \$582 million in 2009 to over one billion in 2012 (Hunter 2014). As a consequence, the number of lawsuits against consumers has skyrocketed, reaching 200,000 in New York State alone in 2011. Other problems include collectors buying portfolios that have been stolen or have already been sold to someone else, threats of violence, and so on. As Halpern documents, the bad paper collection industry often attracts the more unsavory elements of society. As one debt buyer who hired people to collect debts he had purchased described them to Halpern, “Oh my God, they were like thugs,” but, he said, the more clean-cut types couldn’t do the job (2014: 13).

Often the methods used to collect these debts are illegal. In 2015, New York State reached a settlement of \$675,000 with one of the biggest debt buyers, the Encore Capital group, over the filing of thousands of flawed debt collection lawsuits against state residents (Silver-Greenberg 2015). And, as with indebted countries, to repay creditors domestic debtors must reduce spending on such family necessities as food, shelter, and health care.

While there are many other consequences of debt-based money, we will mention only two here. First, while it seems natural to say that we

need to reduce our debt, we must recognize that reducing debt reduces the money supply. There are many who claim that global and domestic sovereign debt is too high and must be paid down. But doing so makes it harder for everyone else to repay his or her debts and could itself produce a financial crisis. That is, for every government debt there is a corresponding private asset, and if the debt is paid off, the asset in the form of interest-bearing securities is destroyed.

To a great extent, the argument over whether to decrease or increase government spending is rooted in the contradictory functions of debt-money. On the one hand, it serves as a *store of value*; consequently, holders of money deplore inflation because it reduces the value (or purchasing power) of the money held. On the other hand, money also serves as a *means of exchange*; consequently the more money (or debt) issued, the greater the amount of economic activity, and the more goods and services produced and jobs created. The fact that central banks have as their prime goal the control of inflation is indicative of who controls central banks—the holders of interest-bearing wealth.¹⁶

Second, there is a hierarchy of debt-owners, such that some receive their return on capital before others; that is, some creditors have priority over others. This is clearest in the case of sovereign debt. Greece, for example, unable to service its sovereign debt, carried out the biggest debt restructuring in history in 2012. Thanks to some €174.5 billion bailout money from other Eurozone governments, Greece was able to pay some of its creditors. But the Eurozone and the IMF required first paying Greek bondholders, and only using what was left for public needs, such as paying pensioners or teachers (Stavis 2013). The logic of this priority is that government bonds are generally considered the safest investment, and if bondholders faced the prospect of greater risk, bonds would cease to be as attractive an investment and more interest would be charged. But if growth is not maintained, debt is more difficult to repay, and more must be confiscated from other sources in order for the interest on the debt to be repaid to priority creditors. Various ways to do this include eliminating money for such things as education, welfare, and health services, as has been the case in developing

countries. Generally such measures go under the term “austerity,” and using a household metaphor, financiers, bankers, and co-opted politicians justify austerity by claiming that the indebted government or country is “living beyond its means,” as if they were all members of one big household irresponsibly spending more than it earned. A more apt household metaphor, however, would be one in which one sibling among ten expropriated 50 percent of the family income, leaving the rest for his nine brothers and sisters. Furthermore, if the family income ever declined, he demanded to be reimbursed first when it increased again, insisting that his brothers and sisters give him a portion of their income if he suffered any loss.

Thus, as Pavlina R Tcherneva (2014) documents, over the past thirty years, in any economic downturn, as soon as growth returns, the wealthiest 10 percent receive their money first, and, more recently, even confiscated some of the income of the other 90 percent (see Figure 4.6).

Figure 4.6 Distribution of average income during expansions

Source: Tcherneva, P.R. (2014) “Reorienting Fiscal Policy: A Bottom-up Approach,” *Journal of Post-Keynesian Economics*, Vol. 37.

As Tcherneva puts it,

An examination of average income growth during every postwar expansion (from trough to peak) and its distribution between the wealthiest 10 percent and bottom 90 percent of households reveals that income growth becomes more inequitably distributed with every subsequent expansion during the entire postwar period. *Only during the 1950–53 expansion did the bottom 90 percent capture all of the average income growth in the economy. Since then, the top 10 percent of households have been capturing a greater and greater share of the income growth and, in the latest expansion, they have captured over 115 percent of the income growth, while incomes of the bottom 90 percent of households declined.* (2014: 54–55, our emphasis)

Inequality and the privileged decile

There is no question that inequality in the United States and elsewhere has risen dramatically over the past forty years, as evidenced by the number of recent works on the subject (see, e.g., Freeland 2012; Noah 2012; Stiglitz 2012; Dorling 2014; Johnston 2014; Di Muzio 2015). Globally inequality has reached the level whereby the global 1% own just under 50 percent of global wealth (Oxfam 2015).

Factors identified as responsible for this trend include rapid technological change, the rapid globalization of the economy, stagnant or declining wages, the growth of finance, and the weakening or outright destruction of labor unions, particularly in the United States. The work on differential capital accumulation that has received the most attention is that of Thomas Piketty and Emmanuel Saez, particularly Piketty's (2014) best-selling *Capital in the Twenty-First Century*, which purports to show that growing inequality is endemic to a capitalist economy.

The idea that inequality is an intrinsic feature of our economic system runs counter to the claim of neoliberal economists who, historically, have maintained that growth will reduce inequality and the need for wealth redistribution. In their view, increased wealth will “trickle down” the economic ladder (Arndt 1978: 46–47; Kempf 2008). The key research on which this claim was based was Simon Kuznets and Elizabeth Jenks

(1953) work, *Shares of Upper Income Groups in Income and Savings*. It was the first work to rely on income distribution statistics and the first to measure social inequality on such a large scale. Based on tax records between 1913 and 1948, the authors demonstrated that economic inequality dramatically decreased during that time, that the income of the top 10 percent went from 45–50 percent of national income to 30–35 percent. Kuznets and Jenks ostensibly had statistical proof that income inequality had dropped dramatically and that capitalism had widespread income benefits in the United States (Piketty 2014: 12–13).

Kuznets and Jenks recognized that the intervening World Wars and the Depression played a role in the lessening of income extremes; nevertheless, the study served as the foundation for economic policy over the next fifty years and the key justification for neoliberal austerity policies.

Piketty essentially replicated Kuznet and Jenk's study by extending the data back to the eighteenth century and forward to the present and into the future. His conclusion was that the normal process in a capitalist economy is for wealth and income divergence, that when, as he put it, the return on capital exceeds the rate of economic growth, as it has done for most of the past two centuries, wealth diverges and inequality increases. Figure 4.7 represents the historical trajectory of

The top decile share in US national income dropped from 45 to 50 percent in the 1910s–1920s to less than 35 percent in the 1950s (this is the fall documented by Kuznets); it then rose from less than 35 percent in the 1970s to 45–50 percent in the 2000s–2010s.

Figure 4.7 Income inequality in the United States, 1910–2010: percent of income earned by the top decile

Sources and series: see piketty.pse.fr/capital21c.

the income in the United States of the top 10 percent, while Figure 4.8 represents the share of income and wealth of the top 1 percent.

We briefly discussed Piketty's contributions in Chapter 1, and this is not a place for an extensive review of his monumental work. But his basic point is that when the rate of return on capital exceeds the rate of economic growth, capital will continue to amass a greater amount of the national income than labor. In essence, going back to our household metaphor, one sibling will continue to expropriate a far larger share of household income than his sisters and brothers. The question of whether or not the privileged child deserves that share is, of course, the stuff of monumental debate.¹⁷ Our question is, how does he do it? For Piketty (2014: 26–27) the key is the role of inherited wealth. He argues,

When the rate of return on capital significantly exceeds the growth rate of the economy (as it did through much of history until the nineteenth century and as is likely to be the case again in the twenty-first century), then it logically follows that inherited wealth grows faster than output and income. People with inherited wealth need only save a portion

Since the 1980s the share of total household wealth owned by families in the top 1% of the wealth distribution has grown proportionally less than the share of total pre-tax national income earned by these families. Source: Appendix Tables B1 and B25. (Piketty 2014).

Figure 4.8 Income and wealth inequality in the United States, 1913–2012: percent of income earned and wealth held by the top 1 percent

Source: Thomas Piketty and Emmanuel Saez (2003) "Income Inequality in the United States, 1913–1998," *Quarterly Journal of Economics*, Vol. 118, No. 1. Updated to 2008 at <http://emlab.berkeley.edu/users/saez>. See more at: <http://inequality.org/income-inequality/#sthash.XAUIRSwA.dpuf>.

of their income from capital to see that capital grow more quickly than the economy as a whole. Under such conditions, it is almost inevitable that inherited wealth will dominate wealth amassed from a lifetime's labor by a wide margin, and the concentration of capital will attain extremely high levels—levels potentially incompatible with the meritocratic values and principles of social justice fundamental to modern democratic societies.

There is no question that inheritance, as Piketty suggests, plays a key role in inequality. But he neglects to discuss the role of debt-based money and the role of interest on debt in the global economy, and debt's role as a regressive tax. Where is this inherited wealth coming from? Debt, itself, as we've mentioned, is a technology of wealth transfer that essentially divides the population into those who are net debtors and the privileged few who are net creditors, a division that today may be more or equally relevant than the standard economic division between capitalists and laborers. That is, net debtors of all countries share—economically, culturally, and socially—more in common with net debtors of other countries than they share with net creditors of their own country (Di Muzio 2015).

As we mentioned in Chapter 1, while the word does not even appear in the index, Piketty's book is in many ways about "debt." For there to be a return on capital invested, there must be a corresponding return that constitutes someone or something's obligation to produce an amount greater than that invested. Whether the return is a loan payment, rent, or profit, like any debt, it must be in addition to and greater than the initial loan or capital input. Consequently, it should come as no surprise that inequality has surged along with surging debt levels, and that once we understand the role of interest on debt in our economy, we can see how debt is essentially a *structural* regressive tax because of the way money is presently issued.

As it is presently constituted, every economic transaction—whether the purchase of a commodity, a rent or mortgage payment, a meal at a restaurant, or payment for some service—must contain interest on

someone or something's debt. Even a portion of income and indirect tax payments will go to service the interest on the public debt held by bondholders.¹⁸ In other words, a portion of the price of virtually everything we buy and every tax we pay is interest on a loan through which money was injected into the economy. The question is, to whom is the interest portion of the price going? The German researcher Helmut Creutz answers thus:

The share of interest contained in prices...when redistributed, do not benefit all households and least of all the weaker ones. The overwhelming part of it flows towards those who have the most interest bearing assets at their disposal. More precisely: the richer one is, this means, the more interest bearing tangible and monetary capital one possesses, the larger is the share that one gets from the pot of the interests collected. The biggest loss is borne relatively, however by those households that have no interest yielding assets, or at least, none worth mentioning. They only pay in without ever getting anything back. (2010: 4)

The extent to which the top 1 percent and 10 percent control interest-bearing (as well as dividend- and rent-bearing assets) is evident in Table 4.1, as are the total debt levels by wealth percentile. In brief,

Table 4.1 Total income generating assets and debts by percentile of wealth: 2010

Asset type	Top 1%	Next 9%	Bottom 90%
Stocks and mutual funds	48.8	42.5	8.6
Financial securities	64.4	29.5	6.1
Trusts	38.0	43.0	19.0
Business equity	61.4	30.5	8.1
Non-home real estate	35.5	43.6	20.9
Total assets for group	50.4	37.5	12.0
Total debt for group	5.9	21.6	72.5

Data from Wolff (2012, 2013).

the top 1 percent own over 50 percent of the wealth-generating assets, but have only 5.9 percent of the debt.

Margrit Kennedy (2012), drawing on Creutz and research on the German economy, writes that some 35–40 percent of everything we buy goes to interest to bankers, financiers, and bondholders. As Ellen Hodgson Brown (2013) notes, that helps explain how wealth is systematically transferred from the majority to the minority at the top of the income pyramid. The one very key consequence of debt as a technology of power is that domination through the redistribution of money to the already rich is mathematically encoded into the system.

Consequently, we have constructed a debt-based monetary system divided into a society of net debtors and net creditors, with the latter comprising, at most, 1–5 percent of the population. If we were to graph the difference, we would get something like the distribution (as in Figure 4.9) based on a 1985 study in Germany (Kennedy and Kennedy 1995: 26).

To further appreciate the role of interest in our economy, Figure 4.10 and Table A.1 show the amount of interest paid each year in the United

Figure 4.9 The distribution of net creditors and net debtors

Figure 4.10 Interest paid as a percent of GDP

States from 1960 to 2012, and the percentage of the national income (GDP) that it represents.

Interest payments in 1960 amounted to some 46 billion dollars, or a little less than 9 percent of the national income. By 1982, interest payments amounted to over \$1 trillion, or some 30 percent of the national income. The rapid rise in interest as a share of US national income was likely caused by the removal of the cap on interest rates, then about 6 percent, due, in turn, to the rise of inflation in the late 1970s and early 1980s that we discussed earlier. It may also be due, in part, to an increase in credit card use. Those caps, however, were never replaced, even when inflation rates declined to historically low levels. Since the early 1980s, the share of national wealth represented by interest has fluctuated between 15 and 31 percent, but since 1980, it has averaged a little over 25 percent of GDP. Essentially, this represents a tax on money, the tax going to private lenders, rather than to the public good.

To illustrate the extent of this transfer of wealth, consider that the amount of interest paid each year in the United States has, since 1978, exceeded the amount paid in federal taxes (Figure 4.11 and Table B.1).

In other words, US citizens pay more to private interests as the cost of issuing money than they pay to the Federal government in taxes to

Figure 4.11 Total interest paid in the United States compared to total federal tax revenue, 1960–2012

Source: Office of Management and Budget, Historical Tables, Table 1.3; <http://www.whitehouse.gov/omb/budget/Historicals/>

run the country! If the United States had not assigned the right to create money to private interests, and had kept for itself the right to issue money as interest-bearing debt, it would have collected, in the period from 1960 to 2012, a sum equal to all Federal taxes with an additional \$20 trillion left over for the public good.

Moreover, to the share of the national income siphoned off in interest on debt, we can add the cost of the financial industry in general, which Thomas Philippon (2014) calculates is at an all-time high of 9 percent of GDP. As Philippon (2014: 2) asks, “consider that 9 percent of US GDP last year was about \$1.4 trillion—an unprecedented windfall for America’s capitalist class. What does society get in return? Or, in other words, what does the finance industry produce?” This does not mean that we do not need a financial industry, as Philippon recognizes, whose role it is to produce, trade, and settle financial contracts, transfer resources, produce information, and provide incentives, to, as the 3rd Lord Rothschild put it, “facilitate the movement of money from point A, where it is, to point B, where it is needed” (Ferguson 2008: 63). The question is, when in earlier eras, as Philippon documents, such services could be provided at 2–4 percent of GDP, why now, with the great

increase in communication technology, can't such services be provided far more inefficiently and cheaply?¹⁹

Our arguments in this book, also, should not be taken as an attack on the market, *per se*, however defined. There is nothing wrong with an economy in which people provide goods and services for others and receive an economic reward, even money, in return. However, the money that is used need not be created by a privileged few as interest-bearing debt through which they would accumulate a vastly disproportionate share of the society's wealth. In other words, while the market is a prerequisite for debt to be used as a technology of power, markets can function perfectly well without a money supply created by a private elite through debt, as the number of alternative currency arrangements around the world demonstrate (Hallsmith and Lietaer 2011). A perfectly workable modern market economy could be created if every individual received money only for productive work or, even, if every person, at the age of 18, was given a set amount with which to buy what was needed. This would not guarantee perfect equality, by any means, but it would ensure that people could choose what to do with their allocation and that, if they needed more, would offer goods or services that others demanded. It would not require perpetual, exponential growth and mounting dependence on a nonrenewable energy supply that destroys the biosphere.

Who controls the future?

Facing the impossibility of sustained exponential growth, mounting environmental problems, historically expensive oil, and wealth concentrating in ever fewer hands when levels of public, corporate, and consumer debts are expanding, the question becomes who, at this point in our history, controls the future?²⁰ If we were to project into the future, who would have the greatest say in what it will look like? No doubt this is a difficult question to answer, but without a sustained democratic movement against the use of debt as a technology of power,

we anticipate that creditors, investors, and the giant firms they capitalize will continue to shape and reshape the limits of the possible for social reproduction and define the limits of how we address the problems we face. To illustrate this concern, we briefly mention the food and energy industries.

The future of food

One of the major long-term problems, particularly in the United States, is that of food supply; not that there is not enough, but, rather, too much. US food manufacturers produce some 3,900 calories a day per person. Their problem is selling it, which, if US obesity rates, particularly for children, are any indication, they are doing very effectively. The average American was some 23 pounds heavier in 2003 than their counterpart of 1960 and still getting heavier (Moss 2012; CDC 2013). This is such a worldwide trend that we could call the process the globalization of fatness and obesity (Roberts 2010; Raine 2012). It is not only about how many calories are consumed but also about the inequality of money and food options and the mass motorization of society that are chief contributors to the growing public health crisis.

There is also a problem with industrial agriculture; it is essentially unsustainable, dependent as it is on two rapidly diminishing resources—oil and water.²¹ However, food production is a very profitable enterprise. But when we examine both US-style food production and consumption, we find an addiction to five things: oil and water on the production end, and salt, sugar, and fat on the consumption end. Our aim, here, is not to fully document the problem; that has been done extensively by others (e.g., Pollan 2007; Moss 2012; Gardner 2013). The question we want to ask is whether, under our present political economy, the global system of food production and consumption, which is hugely profitable, can be changed to one in which production is more sustainable and diets are healthier?

We may believe that we choose our food. But, clearly, what is available to us is controlled for the most part by large food companies who go to

great lengths to discover our tastes and preferences. In a brilliant job of investigative reporting, Michael Moss (2013) describes how even when food companies try to do the “right thing” they are often stymied by investment capital.

In the early 2000s, there were executives at Kraft Foods genuinely alarmed at the contribution of the company to the obesity epidemic and were concerned about the consumer backlash and how it would affect the company in the long run. To get people to eat more of their product required manipulating the amount of sugar, fat, and salt in their foods, but it was resulting in negative health consequences. Could they promote healthier food and remain competitive in an industry that kept adding more sugar, salt, and fat?

At the time, Kraft was owned by Phillip Morris, and executives were worried that sugar, salt, and fat would bring down the processed food industry the same way as nicotine had brought down cigarettes. The tobacco industry, after years of fraud and denial, lost its big lawsuit brought by forty states whose health care programs were buckling under the pressures of tobacco-related illness. It cost the tobacco industry some \$365 billion in the resulting lawsuits.

After years of carefully using just the proper amount of sugar, salt, and fat to maximize sales, Kraft made a decision to cap the amount of sugar, salt, and fat in their foods. However, the result was a drop in their stock price of some 17 percent at the same time as rivals were increasing at 5 percent. What ensued was a meeting with alarmed Wall Street analysts.

Moss describes a conversation a Kraft executive had with Wall Street analysts about lower-than-expected sales and the pressure to do something about it:

“Do you think there’s a bigger problem?” a Morgan Stanley analyst asked. “Because clearly you’re underperforming your peers.” “And what about all this talk about fighting obesity?” asked an analyst from Prudential Securities. “How was the company going to meet the projected sales growth of 3 percent if it was worrying about people’s waistlines?” “You’ve obviously made a statement on obesity,” the

analyst added. “But can you clarify the company’s efforts in achieving a volume increase? You’re going to try to grow your volume 2 to 3 percent domestically, it’s almost got to make us fat.” (Moss 2013: 257)

Under the pressure of investors and in competition with other food giants, Kraft’s executives went back to fat, salt, and sugar and abandoned any attempt to make their products less harmful. More could be said about how the global food system is shaped and reshaped by the logic of differential capitalization and the need for corporate earnings. But this brief example highlights how one company’s executives were more or less forced to maintain the excessive amounts of salt, sugar, and fat in their foods for the sake of earnings in the midst of an obesity epidemic in the United States and elsewhere.

The future of alternative energy

There are considerable debates over the future of energy. However, three main issues are relatively clear: (1) modern capitalism can be conceived of as a petro-market civilization since fossil fuels are the energy base that has allowed for the expansion and deepening of markets and the magnitude of monetary accumulation; (2) fossil fuels are nonrenewable and therefore this civilizational order is nonrenewable; and (3) the turn to coal, oil, and natural gas is altering the climate in ways that have impacted and will impact communities in harmful ways (Di Muzio 2012). Many recognize the need to transform our societies by finding alternative indicators of well-being and encouraging the switch to renewable energy and related technologies. However, studies also note that even if it were possible to run our societies on 100 percent renewable energy, what is not possible is the maintenance, let alone constant expansion of global growth into the next century (Trainer 2007; Heinberg 2011; Zehner 2012). Even if we were generous and included nuclear energy, renewables only make up 18.4 percent of global energy supplies—the remaining 81.6 percent consists of oil, natural gas, and coal. In other words, the transition to renewable energy will be protracted, and without significant direction

and investment from public officials, it is unlikely to be accomplished. There are a number of important reasons for this but the one considered here is what matters most to creditors, investors, and capitalist firms: differential earnings and differential capitalization. Figure 4.12 compares the rise of capitalization in the oil and gas industry with that of its potential rival: the renewable energy industry. What the data demonstrate is that creditors and investors currently have little faith in the future profitability of the renewable energy industry relative its oil and gas counterpart.

Indeed, had you invested in the WilderHill index, you would have lost money from 2007 to 2012. However, had you invested in the oil and gas industry over the entire period, your investment would have grown by 182 percent. The reason is simple: the oil and gas industry is far more profitable than the renewable energy industry and capitalists chase differential returns not civilizational survival (Di Muzio 2012).

Figure 4.12 Comparison of capitalization of oil and gas and renewable energy

Sources: FT 500 2001–2012; WilderHill NEX

Until this goes into reverse or states make considerable investments in renewable energy, global society will be increasingly locked into an unsustainable petro-market world order that will go from crisis to crisis as oil becomes more expensive, debts mount, and austerity measures intensify.

Toward an expanding stark utopia?

When Karl Polanyi wrote *The Great Transformation*, he described the horrendous effects of the development and growth of the industrial economy: the dispossession of rural farmers from their land, widespread pauperization and misery, and the plundering of the natural world. Polanyi predicted that if left unchecked, the “free” market would create a “stark utopia” of human wretchedness and vast ecological damage. In the postwar years, he assumed that the Keynesian policies implemented during and after the Depression would provide such a check on industrial growth by the medium of democratic planning of the economy. But since Polanyi focused on the self-adjusting market as the “fount and matrix” of civilization rather than capitalist credit money, he could not fully foresee the price for maintaining a debt-based monetary system and the exponential economic growth that it requires. Nor could he propose a convincing alternative to the domestic and international monetary order. As suggested above, we are already bearing witness to a geography of stark utopias that stretch across many communities around the world. And the movement toward this stark utopia moves in increments so small that we hardly realize what is happening. We argue that to reverse and avoid its expansion, we need to confront possible alternatives that take money, the environment, and the impossibility of exponential growth seriously—the subject of our final chapter.