Understanding the Political Economy of Enforced Dependency in the Globalized World

A Springboard for Sustainability-oriented Action

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2011

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Executive Summary

In this paper, I develop a theory of enforced dependency as an important organizing aspect of the globalized world-system, and I argue that enforced dependency decreases individual, community, national, and global resiliency. The decreased resiliency that stems from enforced dependency is especially troubling in the current time of converging socio-ecological crises including climate change, peak oil, increasing fresh water shortages, depletion of soil fertility worldwide, decimation of ocean fisheries from overfishing, economic destabilization, increasingly apparent limits to the biosphere's ability to absorb pollutants, and more. I argue that understanding enforced dependency as a driving force behind the many converging crises we face can serve as a springboard for effective sustainability-oriented action aimed at reducing enforced dependency while also increasing resiliency at multiple levels within societies and nature.[1]

I define enforced dependency as a form of reliance upon external resources or externally created conditions. For such dependency to function as enforced dependency, it must, once established, progressively undermine the self-sufficiency and resiliency of the dependent community, institution, government, or person making the dependent party increasingly vulnerable to exploitation. The initial conditions of enforced dependency are often established through colonialism or imperialism. The "enforcement" of enforced dependency derives from the increasingly dangerous and/or destabilizing results that would entail from severing the dependent relationship. Under conditions of enforced dependency, the resiliency of the dependent party diminishes progressively over time. Typically, dependent parties are also progressively co-opted into supporting the system of enforced dependency upon which they have come to rely, even as the system progressively robs them of freedom, independence, and resiliency. As the dependency deepens, the social power of dominant people, institutions, or governments who provide the resources or create the conditions that enforce dependency increases relative to dependent parties. Dominant parties may increasingly constrain the decisions and actions of dependent parties in order to enhance their opportunities to gain material and financial wealth and increase their social power. Though dominant parties may gain substantial wealth and power through enforced dependency, over the long term, their own resiliency may be negatively impacted as the socio-ecological capacity of dependent parties to serve as sources of wealth and power for dominant parties declines.

I develop the theory of enforced dependency through detailed analysis of relevant political and economic history and globalized political economy. I begin this paper by highlighting three important sources of unsustainability within the world-system: fossil fuel depletion, ecological breakdown, and the structural crisis of capitalism as a viable economic system. These converging crises point to the possibility of near-term socio-ecological collapse, a possibility that drives my search for alternatives to the current political economic paradigm. I then define the concept of enforced dependency that serves as a heuristic for the analysis articulated throughout the remainder of this paper. This definition is followed by a discussion of late capitalism as a world-system of enforced dependency. I follow this discussion with an

[1] Among other things, I develop a framework for such sustainability-oriented action in my full dissertation titled *Living and Learning Sustainability: Pedagogy and Praxis in Sustainability Education*. My full dissertation is freely available online and also available through the *Dissertation Abstracts International* database.

analysis of how modern money and debt contribute to enforcing dependency, in part by making economic growth requisite for the functioning of the capitalist order. I then explore how the growth requirement built into the global economy itself contributes to enforcing dependency. This brief exposition on economic growth is followed by a discussion of technological advancement and concomitant labor displacement as destabilizing features of the global growth economy that, nonetheless, deepen dependency on the capitalist system by growing numbers of people worldwide. I then explain how neoclassical economics serves hegemonic interests in the late capitalist world. This explanation is followed by an explication of the Bretton Woods paradigm and a discussion of how this paradigm of global political economy created the foundation for neoliberalism. I then briefly define neoliberalism and discuss how the Bretton Woods institutions (the International Monetary Fund and the World Bank) and global free trade agreements have served the interests of neoliberal capitalists while simultaneously enforcing dependency within the Global South. I then focus attention on how dollar hegemony in the world-system has created complex forms of economic co-dependency that have allowed the United States to become a superpower and simultaneously made the world-system vulnerable economic collapse. I then summarize how the institutions, ideologies, strategies, and structures discussed in this paper combine to create and perpetuate the hegemony of global capitalist elites and culture. This analysis leads me to the following conclusions.

Historically, once indigenous subsistence cultures of place were broken down and colonies were folded into the capitalist system, the dependency of colonized regions was enforced through brute force and later through the creation and enforcement of economic rules and practices. Within the world-system, dependency that was originally enforced by nation states has continued in the late capitalist era in spite of the erosion of nation states' influence by the forces of globalization. Once an individual, a community, or a nation has become dependent upon the capitalist system, there is virtually no escape. Furthermore, the world-system relies upon this dependency in order to feed the engines of economic growth and to maintain the global political and economic dominance of capitalist elites. The system is virtually impossible to escape for debtor nations faced with the choice to comply or collapse economically.

Although this paper focuses on macro-level analysis, it is important to note that dependency is also enforced at the very personal level of individuals and families who lack access to the productive capacities of the land and/or who lack the knowledge and experience necessary to make use of these capacities. The urban poor are also typically entrapped in the day-to-day struggle for existence, and wealthy and middle-class individuals, too, are often heavily indebted to banks. Escape from extreme dependency is possible, but it is very challenging – and, at least initially, it typically comes at a high cost in terms of personal security and social inclusion, a cost some simply cannot afford to bear. Furthermore, many of those who are systematically disadvantaged within the world-system suffer from poverty, poor health, and lack of education, and each of these problems typically compounds and reinforces the effects of all the others in a process that creates powerlessness (Stiglitz, 2002, p. 83).

The complex global systems of enforced dependency are also highly unstable and vulnerable to near-term collapse. Continuing inequities within the global economy promote conflict, both within nations and internationally. At the same time, socio-ecological resiliency is continually sacrificed to fuel the engines of economic growth. As global society realizes diminishing returns on increasing social and economic complexity, the world-system becomes increasingly vulnerable to collapse (see Tainter, 1988). Furthermore, the likelihood that collapse will be catastrophic increases as globalization encourages tight linkages among components and processes of the world-system, making the boom and bust phases of the business cycle increasingly likely to trigger global-scale economic breakdown (see Homer-Dixon, 2006, chap. 9). Environmental damage and stress, and loss of diversity in human and ecological systems compounds these problems, further increasing the potential for global social, economic, and ecological disaster. The monocultures promoted within the world-system in agriculture, popular culture, consumerism, and employment are inherently unstable due to their lack of diversity and their heavy reliance upon petroleum-dependent transportation of goods. Simultaneously, global free market competition in the world-system reduces resiliency because globalization channels power and wealth into the hands of a few while disenfranchising many small-scale, local producers and decreasing diversity in economies, ecosystems, and communities (Douthwaite, 2004). These tensions serve as sources of ever-present and ever-increasing economic and social instability.

Though development bank and corporate officials may see themselves as helping the poor by investing in the Global South, in reality, the institutions and processes of enforced dependency, both global and national, have been created by the powerful in order primarily to serve their own interests, and this service has come at the expense of oppressed people and nature. These institutions and processes actively resist a redistribution of wealth and power that would materially benefit the victims of privilege. Such redistribution would require hegemonic groups to adopt a virtually opposite set of priorities and interests to the ones they have actively advocated for many years, perhaps for entire professional lifetimes. Even if global capital were to genuinely promote economic growth in Global South, economic growth itself is neither a desirable nor sustainable end in socio-ecological terms.

We appear to be reaching the physical -- if not also the moral -- limits of globalization. And so, we must ask ourselves, if the dreams of the late capitalist paradigm are counterfactual to aspirations for a socio-ecologically sustainable society, what kind of dreams should we aim to realize? If we begin with the goal of eliminating systems of enforced dependency in an effort to create or restore diverse and resilient societies, I believe we are on the right track. We must begin this work at home, in our communities, in our nations, and in the larger world-system.

Introduction

The collective violence of globalization is keenly felt daily by the exploited peoples of the world. They feed the engines of profit with their labor while surviving in a state of enforced dependency upon the global economy. Tragically, the subsistence lifestyles that are their heritage have been rendered backward and uneconomic when compared to cheap mass production and industrial agriculture (Douthwaite, 2004, pp. 114-116; Polanyi, 1944/1957, chap. 3-5). Ironically, the relatively privileged citizens of industrialized nations such as the United States also experience the psychic and spiritual violence wrought by globalization. They may benefit materially, at least at this point in time, but they lack many of the meaningful relationships with people and nature that typified more resilient, self-reliant, and localized communities prior to the rapid expansion of globalization (Achbar, Simpson, Bakan, & Crooks, 2005; Armstrong, 1995; Berry, 1987; Martinez, 1997; Nelson, 1983; Polanyi, 1944/1957, chap. 4; Salmon, 2000).

The self-perpetuating and self-reinforcing systems of power and exploitation that are the focus of this paper embody a global system of collective violence. Collective violence consists of "actions by large numbers of people that contribute to large-scale destruction" (Summers & Markusen, 1992/2003, p. 215). The destruction can be social, environmental, or both. I argue that the political economy of late capitalism[2] *requires* collective violence and systematically entraps people as both willing and not-so-willing participants. The large scale of the political economy of globalization and the complex relationships among its principle proponents and structures diffuse responsibility for destructive outcomes and promote a culture of obedience in the face of power.

The enormity of the global economy and its inbuilt requirement for growth place heavy pressure upon people and nations worldwide to deliver compliant consumers, raw materials, and energy to feed the system. This pressure manifests in the overt manipulation and exploitation of peoples and places of the Global South and in the increasing pace and demands of life and work in the industrial world. Within the global system, former colonies attempt to carve out their share of wealth at the same time that a specific set of global institutions, relationships, structures, and trends ensure that they remain at the service of the First World (Robbins, 1999, pp. 101-107).

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[2] I use the term late capitalism explicitly to imply several things. I propose that the capitalist system is nearing its logical conclusion because it is both consuming the resource base necessary for its functioning and concentrating wealth in fewer and fewer hands. Intense concentration of wealth in the global economy increases both the extent and intensity of suffering and discontent among the dispossessed, and it spurs their resistance to the system, thereby threatening capitalism's indefinite continuance. Concentration of wealth also impedes the circular flow of money required for continued consumption within the ever enlarging capitalist system. This flow is being impeded to such an extent that the global economic system itself is nearing a breaking point. We cannot have continued growth in production in the face of depleting resources such as oil, fresh water, and arable land, and we cannot have continued economic growth at the same time that the ability of consumers to purchase goods is rapidly eroding. The system is starving and bankrupting itself. I do *not*, however, imply that we need only sit back and wait for the system to come apart of its own weight. In fact, such passivity in the face of impending collapse would virtually guarantee chaotic responses in which the uninformed and unprepared would lash out in desperation against many who had contributed little to creating the disaster. We must prepare for the end of capitalism as we know it by building alternatives to it, especially concerning the provision of basic needs. We must work to take the system apart and also be prepared for its possible sudden collapse. This rationale for using the term "late capitalism" draws on the works of Mandel (1972/1975) and Jameson (1991).

This paper is rooted in *political* economy. I demonstrate how the neoliberal global economy is a *political* entity that is far from neutral in the awarding of privileges and inflicting of harm. The global economy is not a neutral and self-regulating machine, and the very idea of the self-regulating market is itself political (Polanyi, 1944/1957, chap. 6). Nations, communities, and individuals caught in the global economy's web – virtually everyone everywhere at this point in time – are constrained in their day-to-day and long-term decision making and actions into supporting the global system through their participation in it. Participants may or may not be rewarded by receiving the necessities of life (and sometimes much, much more – or much, much less) from the system, but their participation is ultimately self-defeating in that it undermines long term sustainability and well-being for individuals and communities. But there are few choices for most of us: we participate under threat of duress, even death.

In this paper, I focus on the post World War II (WWII) period -- late capitalism -- which is characterized by the rapid growth of an increasingly integrated global economy, and I examine some of the mutually- and self-reinforcing systems of concentrated political and economic power of late capitalist globalization. Specifically, I define the concept of enforced dependency, and I analyze the structural and systemic features of the political economy of enforced dependency. In the process, I analyze certain power structures and practices that embody the momentum and inertia of globalization, and I focus attention on the mechanisms that enforce the dependency of ever growing numbers of people on the system of global capitalism that paradoxically and simultaneously both sustains and depletes them.

Most importantly, I argue that late capitalist globalization is unsustainable because it spreads and enforces forms of dependency that undercut socio-ecological resiliency. I demonstrate that, through enforced dependency, late capitalism is consuming its own foundations and is headed for collapse. I elucidate important sources of destructive and ultimately self-destructive enforced dependency in an effort to contribute to sustainability-oriented social change. Socio-ecological sustainability, as the ultimate goal of the praxis I advocate, is conceptualized as "the long-term equilibrium of health and integrity maintained dynamically within any individual system (organism, organization, ecosystem, community, etc.) through a diversity of relationships with other systems" (Pittman, 2007).

I offer in this paper a lens for comprehending how key aspects of globalization enforce dependency worldwide. I focus on how globalization fosters and perpetuates dependency on globalized capitalism by ever growing numbers of people in ever more locations, and I demonstrate how forms of global enforced dependency impact socio-ecological resilience and threaten our ability to live sustainably. I explore how and why the political and economic horizons of societies narrow as a result of late capitalist, neoliberal globalization so that, even should a nation, community, or society wish to reverse or change course, the late capitalist system enforces continued political and economic dependency on the global economy.[3]

While the poor quite obviously pay the biggest price for the economic and political gains of dominant societies and classes within the global system, I argue that everyone will lose in the

[3] Although questions of whether or not neoliberal globalization can promote economic growth or reduce poverty are important in that they open additional avenues for critiquing late capitalism, these questions are explored in this chapter chiefly in terms of their impacts on socio-ecological resilience and sustainability.

end as the processes and logic of neoliberal globalization continue their forward march. Everyone loses in terms of socio-ecological resilience in the face of the currently unfolding crisis of the global capitalist system that has consumed its very foundations. In order to build more equitable and sustainable societies beyond the capitalist crisis in history, it is precisely the building blocks of community resiliency that we will need. It is my hope that, by developing an understanding of the sources of resiliency depletion within global political economy, people can engage in sustainability-oriented education and praxis that can improve socio-ecological resilience.[4]

I begin this paper by highlighting three important sources of unsustainability within the world-system: fossil fuel depletion, ecological breakdown, and the structural crisis of capitalism as a viable economic system. These converging crises point to the possibility of near-term socio-ecological collapse, a possibility that drives my search for alternatives to the current political economic paradigm. I then define the concept of enforced dependency that serves as a heuristic for the analysis articulated throughout the remainder of this paper. This definition is followed by a discussion of late capitalism as a world-system of enforced dependency. I follow this discussion with an analysis of how modern money and debt contribute to enforcing dependency, in part by making economic growth requisite for the functioning of the capitalist order. I then explore how the growth requirement built into the global economy itself contributes to enforcing dependency. This brief exposition on economic growth is followed by a discussion of technological advancement and concomitant labor displacement as destabilizing features of the global growth economy that, nonetheless, deepen dependency on the capitalist system by growing numbers of people worldwide. I then explain how neoclassical economics serves hegemonic interests in the late capitalist world. This explanation is followed by an explication of the Bretton Woods paradigm and a discussion of how this paradigm of global political economy created the foundation for neoliberalism. I then briefly define neoliberalism and discuss how the Bretton Woods institutions (the International Monetary Fund and the World Bank) and global free trade agreements have served the interests of neoliberal capitalists while simultaneously enforcing dependency within the Global South. I then focus attention on how dollar hegemony in the world-system has created complex forms of economic co-dependency that have allowed the United States to become a superpower and simultaneously made the world-system vulnerable economic collapse. I then summarize how the institutions, ideologies, strategies, and structures discussed in this paper combine to create and perpetuate the hegemony of global capitalist elites and culture. I conclude this paper by suggesting some directions for cultures and economies to move toward socio-ecological sustainability.

Converging Crises

We begin our analysis of late capitalism as a system of unsustainable enforced dependency with a brief overview of three global-society-changing crises that frame and inform every aspect of the arguments articulated in this paper. These crises are ecological breakdown, fossil fuel depletion, and the structural crisis of capitalism as a viable economic system.

[4] I will focus on ways to increase the resilience of human/nature systems in chapters four and five of this dissertation. In chapter six, I focus on higher education as one context for doing so.

Ecological Breakdown

Climate change represents perhaps the most well known all-pervasive threat to ecosystems planet wide (FEASTA, 2008; Guggenheim, 2006; Intergovernmental Panel on Climate Change [IPCC], 2007; Orr, 2009). Additional drivers of ecological breakdown include widespread pollution that has made its way into all areas of the biosphere; overharvesting of plants and animals that threatens to eliminate possibilities for population regeneration and to decrease species resilience through narrowing genetic diversity; extensive human takeover of habitats worldwide that places further stress on species resilience and biodiversity as well as on genetic diversity within species; and fresh water damming, diversion, and mining that are dewatering some ecosystems and flooding others (Barlow & Clarke, 2002; Booth, 2002, chap. 4-5; Douthwaite, 1999b, chap. 10; Homer-Dixon, 2006; Meadows, Randers, & Meadows, 2004; Reisner, 1993). To make matters worse, multiple sources of ecological damage compound one another (Booth, 2002, chap. 4), bringing species to the point of extinction and ecosystems to the verge of collapse.

To make matters even worse, societies everywhere have been shoehorned into the capitalist mode of production and distribution -- a form of economic life and a culture defined and driven by capital accumulation and *not* by reciprocal duties to others and the natural world. The health of people and the environment most often does not easily or directly translate into profits in corporate balance sheets. Capitalism recognizes money as *the* measure of value and thereby focuses those who participate in and depend upon capitalism on making money as the central, perhaps only, means to achieving well-being. If human populations globally have become largely dependent upon the capitalist system, their dependence increases the odds for catastrophic ecological breakdowns by seemingly severing the ties between environmental and social health that were recognized and carefully maintained in successful, place-based indigenous societies (Armstrong, 1995; Martinez, 1997; Nelson, 1983; Salmon, 2000). Although late capitalism has obscured the relationships between environmental destruction and capital accumulation and between environmental and social health, we are witnessing the limits of this obfuscation as global ecological crises converge before our eyes (Homer-Dixon, 2006; Meadows, Randers, & Meadows, 2004; Orr, 2009). We are running out of places to go where ecological distress is not evident.

As we analyze the political economy of enforced dependency, it is important to remember that, not only is capitalism itself reaching the limits of its ability to contain its own contradictions, but the biosphere is also nearing its limits to support extractive, wasteful, and toxic capitalist development (Orr, 2009). Not only is capitalism consuming its own base economically (Wallerstein, 2008a, 2008b), it is poisoning and depleting the ecological base required for the economic growth that is integral to the system (Daly, 1999).

Fossil Fuel Depletion

Oil, natural gas, and coal fueled the industrial revolution, and they remain the primary sources of energy currently driving the global economy. We will examine depletion of each of these sources of energy, with a focus on oil, in order to understand how fossil fuel depletion threatens to destabilize the global growth economy and, ultimately, render capitalism as we know it unworkable.

Inevitably and soon, global demand for oil and natural gas will outstrip global extraction and supply of these same resources (Campbell & Strouts, 2007, part I; Clark, 2005, chap. 3; Deffeyes, 2001; Douthwaite, 2004, p. 118; Greene, 2004; Heinberg, 2005, chap. 3; Kuntsler, 2005, chap. 1; Roberts, 2004, chap. 2; Simmons, 2005). The long-term implications of declining fossil energy supplies are immense. To fully comprehend the implications, it is important to understand the complexities of energy supplies and their interrelationships with the global economy, geopolitics, food production, transportation, and more. This work has been done well by others (Campbell & Strouts, 2007, part I; Clark, 2005; Deffeyes, 2001; Greene, 2004; Heinberg, 2005; Kuntsler, 2005; Roberts, 2004; Simmons, 2005). I offer here only a few highlights to shed light on why fossil fuel dependency is unsustainable and how it creates extensive instability in the globalized world.

Oil depletion is a well known, studied, and documented fact. The first person to study this phenomenon, Dr. M. King Hubbert, a highly respected petroleum geologist, predicted in 1956 that oil production in the U.S. would peak in the early 1970s (Heinberg, 2005, p. 97; Deffeyes, 2001, chap 1). In fact, U.S. domestic production data show that domestic oil production did peak in 1970. In hindsight, the idea of peak production makes complete sense. Oil is not renewable. Oil fields are under pressure from the layers of rock, earth, and sometimes water above them. The liquid oil *wants* to escape upward from the field, which means that the effort needed to extract the resource is low at first. As more and more wells are drilled into a new field, oil production increases for a time (and the pressure within the field slowly drops) until production peaks. Thereafter, no matter how many new wells are drilled, production will inevitably decline as the oil becomes harder to extract (Greene, 2004; Heinberg, chap. 3; Kunstler, 2005, pp. 24-25; Roberts; pp. 50-51). Declining production is a familiar domestic reality in the United States. Once foremost among petroleum exporting nations, in 2007 the U.S. imported just over 65% of the oil it consumed (United States Energy Information Agency, 2008). Many well respected petroleum geologists predict a global peak in oil production between before 2015 (Deffeyes, 2001; Greene, 2004; Heinberg, 2005, chap. 3). In a lecture given in Cork, Ireland, in the summer of 2008, well known and internationally respected oil geologist Colin Campbell predicted we would see peak production of conventional oil in that same year.

The arguments of those who downplay or refute the importance of peak oil production coalesce around two central points: 1) that there is a great deal more oil to be discovered/extracted and 2) that human innovation and technology will make limits to oil production irrelevant (see Huber, 2002; Lomborg, 2001; Lynch, 2001, 2003). This cornucopian camp consists mainly, though not entirely, of economists and those whose current political and economic interests are best served by assuming a rosy outlook for future oil production (Heinberg, 2005, pp. 118-136; Kunstler, 2005, pp. 28-29; Roberts, 2004, chap. 4). Economic growth is predicated upon ever growing supplies of fossil fuel-based energy, and predicting limits in sight to extraction of these resources is neither likely to buoy the consumer and producer confidence necessary to maintaining economic growth nor to garner political support from modern populations who depend upon the global growth economy for their livelihoods (Campbell & Strouts, 2007, pp. 11-12; Greene, 2004).

As for the possibility of future discoveries fueling global economic growth, worldwide oil discoveries peaked in the mid-1960s and have declined to such an extent that it would be nearly impossible for even large discoveries to reverse this trend (Heinberg, 2005, pp. 109 & 114). Witness the significant non-OPEC oil sources that are in decline (the United States, Mexico, and the North Sea are among these). Recent finds also do not compare well in size to earlier finds made in important oil regions such as the Middle East and Texas (Roberts, 2004, p. 51). In 2008, the world was using more than four barrels of oil for every one barrel discovered (Campbell, 2008). If this trend could be easily reversed, there is little doubt that it would have been over the past 40 years. According to Thomas Homer-Dixon (2006),

> Despite exploration companies' immense investments of capital and technology, oil discovery in the U.S. has declined steadily since 1930. As the petroleum geologist Colin Campbell notes, 'The United States had the money to [discover more oil], it had the incentive, [and] it had the technology, so the fact that discovery reached a peak – and then declined inexorably for … seventy years – is not for want of trying. It was due to the physical limits of what nature gave them.' (p. 87)

Peaks in oil production lag decades behind peaks in discovery. According to internationally respected peak oil educator Richard Heinberg, at this point, "countries in [oil production] decline account for about 30 percent of the world's total oil production" (2005, p. 115). Matthew Simmons, founder and Chairman Emeritus of Simmons & Company, the world's largest energy investment bank, asserts that Saudi Arabian oil production may be at or near its peak (Simmons, 2005, parts three and four). Even if new discoveries could push global peak oil production many years into the future, these discoveries would only delay the inevitable while also serving to further socio-economic dependence on oil based production, transportation, and development patterns.

The concept of net energy is also important to understand when considering oil production and sources of energy that might substitute for fossil fuels. The oil produced from a new field requires little effort to extract, but later on, the efforts required to lift oil from a declining field must intensify, so that the energy profit from the endeavor declines. Eventually, if extraction were to continue long enough, lifting oil from a declining field would become an energy losing proposition. Optimists often cite the many useful technologies employed in the modern energy industry for discovering and producing oil reserves as evidence of long-term ability to increase production levels or at least hold them flat (see for example Lomborg, 2001; Lynch 2001). What is not often acknowledged is that these investments are also *energy investments* and that the harder we have to work with these new technologies, the lower our net energy return. Furthermore, even if we were to suddenly be able to dramatically increase flows of petroleum with these technologies, doing so would only deepen a later energy crash because the total volume of oil available to us is finite (Heinberg, 2005, chap. 3-4).

And what about the second argument advanced by the cornucopians, that human ingenuity and technology will provide us with other sources of energy that might substitute for oil? (see for example Lomborg, 2001). For some energy "sources" such as hydrogen that are often cited as potential contributors to a new energy economy, the net energy picture is particularly dim. Hydrogen must be refined from natural gas or electrolyzed from water (a process that requires electricity). According to the second law of thermodynamics, the hydrogen captured through this process actually has *less* energy available to be applied to work than was available for use from the electricity or the natural gas used to create the hydrogen in the first place. While hydrogen may serve future useful purposes as a storage medium for excess energy generated from renewable sources, it is hardly an energy *source*. It is only an energy carrier (Greene, 2004; Heinberg, 2005, pp. 161-168; Scheer, 2007, pp. 89-94).

Furthermore, many forms of renewable energy cited as replacements for oil (including wind and solar power generation, wave and tidal generation, hydroelectricity, and nuclear and geothermal generation) produce electricity. At this point in time, our global transportation infrastructure runs on liquid fuels, not electricity (Heinberg, 2005, chap. 4; Hirsch, Bezdek, & Wendling, 2005), and transportation remains the most difficult problem in terms of finding replacements for oil. With the global fleet numbering hundreds of millions of vehicles (Heinberg, 2005, chap. 2) – each of which required the equivalent of about 90 barrels of oil to fabricate (Greene, 2004) – and considering the miniscule to nonexistent infrastructure for alternative fuels (Heinberg, 2005, chap. 4; Hirsch, et al., 2005), we are facing a problem of monumental proportions – and one that will require us to use vast amounts of oil to address technologically. Although electric vehicles can be produced, an incredible energy investment would be needed to produce the vehicles and the additional infrastructure needed to transition all automobiles and trains to electricity, and it is doubtful that global shipping and air travel could be transitioned to run on electricity. Though a concerted effort to reduce the use of liquid fuels in cars by using electric-powered trains and light rail, for example, could theoretically free up liquid fuels for use in other forms of long distance transport, it seems highly unlikely that nations faced with high debt levels (nations that are now cutting back on basic services) will be able to make these kinds of investments any time soon, at least on the scale that would be needed to avoid deep impacts to international shipping.

Biofuels such as ethanol and biodiesel can be used as liquid fuels to run some of the current global transport system, but growing the crops necessary to fuel the vast amounts of transportation required for globalization usually means competing with food production. Skyrocketing tortilla prices in Mexico have been linked to increased demand for corn-based ethanol in response to rapid oil price increases in 2007 and 2008. Corn producers sought the highest profits for their product, and a shortage of corn for food resulted (Patel, 2007). The European Union's goal of deriving ten percent of its liquid fuels from plant-based sources by 2015 has been a factor in recent land grabs in Africa where large tracts of land are being acquired to produce and export biofuel feedstocks from countries where large numbers of people are hungry (Vidal, 2010).

We can run some of our current vehicles on natural gas, but we do not have many of those vehicles, and natural gas is now in decline in North America where a large percentage of the global fleet is used for day-to-day transportation (Darley, 2004; Greene, 2004). Furthermore, the depletion picture for natural gas is similar to that for oil except that, once peak production has passed for a natural gas field, production declines much more rapidly than for a depleting oil field. Combine this supply picture with the fact that, in the United States, recently built electricity generating capacity is fueled by natural gas, and the potential for energy crisis triggered by declining natural gas reserves becomes apparent (Greene, 2004). Add to this picture that natural gas serves as a major feedstock for creating plastics and synthesizing agricultural fertilizers, and the potential for widespread economic impacts and even food shortages also becomes clear (Greene, 2004; Heinberg, 2005, chap. 5). Some suggest that areas such as North America that face declining natural gas production may be able to rely on natural gas shipped by tanker. This proposition would require heavy infrastructure (and, therefore, energy) investments, not to mention that the process of super cooling and shipping this gas would negatively impact the net energy we could harvest from these resources (Darley, 2004; Heinberg, 2005, chap. 4).

Oil shale and oil sands as sources of liquid fuels have their own net energy and environmental costs. These sources are inefficient in terms of net energy profit as compared to liquid petroleum. It is likely that exploitation of some of these deposits will continue to occur as conventional oil supplies decline, but they will not make up net-energy-wise for conventional petroleum reserves (Heinberg, 2005, chap. 4; Hirsch, et al., 2005, pp. 40-42). What is more, the processing of oil sands releases a great deal of carbon dioxide, something we do not need more of in our atmosphere according to the scientific consensus on climate change (Guggenheim, 2006; IPCC, 2007; Orr, 2009).

Optimists often cite energy efficiency gains over time, noting that, as technology improves with time, we get more work done with lower quantities of energy (see for example Huber, 2002; Lomborg, 2001), but it is important to note that efficiency means little in the depletion picture without reduced total usage. With worldwide population growth and newly emerging industrial nations, the total global energy budget was rising quickly prior to the 2008 global economic downturn. Rising efficiency has also been correlated with increased energy density of primary energy sources. It is likely that increased efficiency levels will be harder to achieve if we must rely on renewable energy sources and coal – both of which offer opportunities, but at reduced energy density levels (Heinberg, 2005, chap. 4).

Some experts cite large reserves of coal as a help in balancing our future energy budget (see Hirsch, 2005, pp. 43-44). Coal can be liquefied to produce synthetic petroleum (Hirsch, 2005, pp. 43-44, 78); but, as with oil shale and oil sands, we have little to no infrastructure globally for refining this liquid fuel (Hirsch, 2005, pp. 78-79). Furthermore, dependence on coal for transportation -- even if we could get enough processing plants and filling stations in place -- would require massive mining and contribute heavily to climate change – *and* we would be relying on yet another depletable source of energy for our transportation, and one much less energy dense than petroleum. Furthermore, future heavy reliance on coal as a source of transportation fuel and/or for electricity generation means almost certain climate catastrophe.

The availability of dense, convenient sources of fossil fuel energy has increased the historical inertia of industrialism, and use of fossil fuels by relatively rich nations and people has contributed to the ever increasing concentration of wealth and power that is destabilizing the global economy. But fossil fuel depletion is likely to play an important role in raising possibilities – even mandates – for social change. If fossil fuel dependency proves to be the Achilles heel of Western industrial hegemony, economic growth (required for the global economy to avoid collapse) will prove unsustainable. Given the central role of fossil fuels in the late capitalist global economy, peak oil and gas are among the leading contributing factors to the instability and unsustainability of the current political economy.

The Structural Crisis of Capitalism

According to Nobel Prize winning economist Joseph Stiglitz and path breaking sustainability-oriented economist Richard Douthwaite, globalization has created an unstable economy that is highly susceptible to crisis (Douthwaite, 2004, pp. 118-119; Stiglitz, 2002, p. 6). Writing in 2009, political economist Damien Cahill noted:

> In the space of a year the unthinkable occurred. What began as a collapse in one segment of the U.S. housing market has spilled over into a crisis of the global financial system. In response, the governments of two of the world's most powerful capitalist nations, the U.S. and Britain, have nationalized major financial institutions, reversing the privatization trend of the last two decades. French President Nicholas Sarkozy proclaimed, 'Laisez-faire is finished.' Dominique Strauss-Kahn, head of the International Monetary Fund (IMF) – which requires developing nations to impose neoliberal structural adjustment programs on their citizens in order to qualify for loans -- laid blame for the crisis on 'not enough regulations or controls.' (Cahill, 2009, p. 35)

It seems that the neoliberal project of fostering free trade, privatization, and globalization in what was deemed to be a self-regulating market, instead of promoting stability, has delivered up a major crisis that threatens the existence of capitalism as the dominant form of modern political economy.

Deregulated, free market capitalism is consuming its foundations. Production has been outsourced to the Global South while buying power has been concentrated in the U.S. and other industrial countries (Kaplinsky, 2005, pp. 164 & 178-180). Workers who produce products see their incomes eroded by economic pressure for low cost production while buyers, concentrated in particular in the U.S., maintain their spending in an atmosphere of declining real wages by accruing ever more debt. According to William Greider,

> The present regime is pathological fundamentally because it broadly destroys consumer incomes while it creates the growing surfeit of goods …. Greater social equity is consistent with and, indeed, required for a sound and expanding economy: when rising incomes are broadly distributed, it creates mass purchasing power – the rising demand that fuels a virtuous cycle of growth, savings and new investment. When incomes are narrowly distributed, as they are now, the economic system feeds upon itself, eroding its own energies for expansion, burying consumers and business, even governments, in impossible accumulations of debt. (Greider, 1997, p. 321)

The fact that global energy producers will be able to capture ever higher proportions of profits from production of oil and gas as these resources become scarce further increases the concentration of wealth and power in the global economy, thereby threatening to destabilize the system by impeding the circular flow of money between consumers and producers. This circular flow is necessary for the continual consumer purchasing that keeps the global economy afloat.

Several important factors have combined to produce a crisis in the financial sector and a global recession (see Greider, 1997; Wallerstein, 2008a). These include:

- The concentration of wealth and buying power that manifests in forms of overproduction and underconsumption emblematic of narrowing possibilities for participation by many people in the money economy, a phenomenon that jeopardizes the long term growth of the system;
- Deregulation of banks that has allowed excessive risk taking in institutions so large that their failure could destabilize the entire global financial sector;
- Over-indebtedness of individuals as real wages have declined (particularly in the United States) and over-indebtedness of entire nations (foremost among these the United States);
- Depletion of resources requisite to economic activity and growth; and
- Shrinking margins for possible profits as globalized competition has reduced prices for many commodities and products.

Heavy debt loads borne by consumers and nations, the decline of ecosystems, and the depletion of resources that serve as the global productive base have combined to make the current downturn especially challenging to reverse (Orr, 2009). When we add to this list of challenges the fact that Keynesian methods of priming the economic pump through government spending are unlikely to generate the desired effects in a globalized economy because money spent in one nation quickly leaks away into other areas of the global economy (Douthwaite, 2004, p. 119), we see that, as suggested by sociologist and world-system theorist Immanuel Wallerstein (2008a, 2008b), the current crisis of capitalism may indeed be the crisis that signals the beginning of the end of capitalism itself. According to Stiglitz (2009), it is the "the belief that markets are self-regulating and that the role of government should be minimal" that created the platform upon which the factors of economic collapse have converged.

Using the financial sector as a prime example, Thomas Homer-Dixon cites tight coupling among institutions, nations, and subsystems of the global economy as another important source of economic instability:

> Any bank faces a fundamental mismatch between the time frames of its liabilities and assets: although its customers' deposits can be withdrawn quickly, its loans are usually invested for long periods…. [There are also] risks arising from the soaring connectivity, speed, and complexity of the international financial system. Today's communication technologies have so increased the number, tightened the coupling, and boosted the pace of transactions within globalized markets that once a destabilizing feedback loop – like a stock market crash or a run on a weak currency – takes hold, it can spiral into a crisis before policy makers can respond, and then it can cascade outward to affect other economies far and wide…. Today, the international financial system resembles a huge, crowded theater that's vulnerable to fire….Speculative capital can be moved from one economy or currency to another with the click of a computer mouse, which means that everyone can converge on the financial system's exits simultaneously. But only those who escape first win, and investors and speculators are terrified of being left behind with

a worthless stake in an imploded currency or economy. (Homer-Dixon, 2006, pp. 182-183)

Add to these instabilities the fact that a large real estate bubble was created in recent years in the United States, largely due to low interest rates and easy credit. Homebuyers during the bubble years made risky purchases and assumed adjustable rate mortgages with their ability to repay resting on the assumption of rapid and never ending increases in home values. Predatory lending practices contributed to the home buyers assuming dangerous levels of mortgage debt that, in an economic downturn, would lead to widespread foreclosures, as has proven the case since fall 2008. Deregulation in the banking sector laid the groundwork for risky mortgages to be repackaged as mortgage backed securities and widely marketed and sold as stable investments, when in fact these securities were very risky investments indeed. The collapse of the real estate bubble in the U.S. triggered the severe global recession that began in fall 2008.

Global banks have also been participating in what amounts to a global casino using complicated financial instruments such as derivatives and credit-default swaps to gamble with their assets. According to Joseph Stiglitz (2009), in the global casino economy, "the problem is that, with this complicated intertwining of bets of great magnitude, no one [can] be sure of the financial position of anyone else – or even of one's own position." Banks and investors were able to take huge risks for huge returns while the lack of transparency in the system hid the dangers from average citizens and while investment banks and stock brokers encouraged the investment of pensions and other funds critical to social welfare into this temporarily highly profitable but ultimately extremely fragile system.

We will explore below how lending policies of the Bretton Woods institutions also create instability within the national economies of many nations and how this instability compounds the fragility of the world-system. At this point, it is important to understand that capitalism itself is proving inequitable, unreliable, and unsustainable as a global system of production and distribution (Douthwaite, 2004). Therefore, as more and more people are drawn into dependence on this system for access to the necessities of life, the world's populations are finding themselves in an increasingly perilous position.

We now turn our discussion to exploring how and why people and entire nations become dependent upon the capitalist economy – and why they find it difficult to impossible to reverse this dependency once it is established. We begin with a discussion of enforced dependency.

The Concept of Enforced Dependency

The concept that I call *enforced dependency* is not entirely new, but thusly named as a distinct concept, I believe it can offer opportunities for fresh insights on the phenomenon of globalization. In particular, the concept of enforced dependency provides a lens for understanding the weak points within the structure of global capitalism, particularly those that relate to its long term socio-ecological and economic sustainability. In this section I define enforced dependency as it is constructed and as it functions in multiple arenas within the broad phenomenon of globalization.

Enforced dependency is a form of reliance upon external resources or externally created conditions. For such dependency to function as enforced dependency, it must, once established, progressively undermine the self-sufficiency and resilience of the dependent person, community, institution, or government, making the dependent party increasingly vulnerable to exploitation. The initial conditions of enforced dependency are often established through colonialism or imperialism. The "enforcement" of enforced dependency derives from the increasingly dangerous and/or destabilizing results that would entail from severing the dependent relationship. Under conditions of enforced dependency, the resiliency of the dependent party diminishes progressively over time. Typically, dependent parties are also progressively co-opted into supporting the system of enforced dependency upon which they have come to rely, even as the system progressively robs them of freedom, independence, and resiliency. As the dependency deepens, the social power of dominant people, institutions, or governments who provide the resources or create the conditions that enforce dependency increases relative to dependent parties. Dominant parties may increasingly constrain the decisions and actions of dependent parties in order to enhance their opportunities to gain material and financial wealth and increase their social power. Though dominant parties may gain substantial wealth and power through enforced dependency, over the long term, their own resiliency may be negatively impacted as the socio-ecological capacity of dependent parties to serve as sources of wealth and power for dominant parties declines.

Thomas Homer-Dixon describes the process of what I call enforced dependency and articulates how it interfaces with the Gramscian cultural hegemony (1971/1999, pp. 57-58) of the late capitalist paradigm and with Marcusean repressive desublimation (1964):

> We find it far easier to play by the rules if we actually believe in the legitimacy and reasonableness of the larger system that lays down those rules. We become invested in the capitalist worldview. Without it, our modern world wouldn't make much sense at all: we wouldn't know our social and economic roles, and we'd have difficulty connecting and communicating with people. We realize, too, that it's senseless to challenge openly our economic system's overarching logic because we'd be challenging the source of our own paycheck – the goose that laid the golden egg, so to speak. The basic truth of this economic arrangement is crystal clear to everyone: the interests of business prevail over all others. So our economic system generates pervasive insecurity; this insecurity impels us to play by the rules; our need to play by the rules encourages us to find these rules morally legitimate; and our belief that the rules are legitimate creates a huge obstacle to changing them. For many of us, the denial is entirely rational. (Homer-Dixon, 2006, pp. 217-218)

We can view enforced dependency as a central theme (in the Freirean sense) of late capitalism. Freire advocates consciousness building in critical pedagogy through identifying and critiquing oppressive themes that pervade social reality. The process of critiquing these themes serves as an avenue for praxis toward resolving the contradictions of capitalism and creating new ways of producing, distributing, and being in the world (Freire, 1970/2000, chap. 3). The concept of enforced dependency is used throughout this dissertation as a tool for both analyzing unsustainable systems and for suggesting alternatives to them.

As globalization extends its reach into new areas of life and new communities, systems of local self sufficiency and decision making -- that are also often comparatively sustainable – give way to systems of economic and social dependency upon money and the globalized economy (International Society for Ecology and Culture [ISEC], 1993; Norberg-Hodge, 1991/1992). This widespread dependency of societies upon the very systems that oppress them serves to increasingly entrench hegemonic forces and to add increasing momentum to the trajectory of globalization itself (Miller,1999). Path dependency with regard to past and current choices also contributes to the entrenchment of enforced dependency over time because, once a community or society has made or been forced to make some critical choices – monetizing their economy is one of these -- future choices become based on the foundations created through these past decisions. Reversing past decisions becomes increasingly difficult because doing so would create widespread social and economic dislocation. Forms of capitalist global integration that create and enforce dependency are also characterized by path dependency in that, once a community or society is folded into the global economy, the people find it nearly impossible to extract themselves from the capitalist system. The post-war Green Revolution in agriculture provides an excellent example of path dependency.

Elucidating the sources of enforced dependency operating within society means constructing a critique of globalization that focuses attention specifically on those institutions, practices, cultural phenomena, and ideologies that foster dependency at multiple levels within the world-system. Stiglitz (2002) defines globalization as “the removal of barriers to free trade and the closer integration of national economies” (p. ix). We begin with this definition while noting that the constituents of globalization as a phenomenon also specifically include all of the dependency enforcing institutions, practices, cultural phenomena, and ideologies discussed below. We now turn our attention to applying the world-system approach of Immanuel Wallerstein as a vehicle for understanding the overarching phenomena that characterize globalization.

Industrial Capitalist Production as Dependency in the World-System

In this section, I argue that enforced dependency infuses late capitalist systems of production and that these systems of production have assumed global scale so that modern political economy operates as world-system. In his classic work *The Great Transformation*, Karl Polanyi (1944/1957) documents how, during the eighteenth and nineteenth centuries in England, the capitalist mode of production and capitalist political economy replaced traditional means of production and distribution within society. He notes that, within traditional societies worldwide, economic activity served to build and maintain social relationships and to satisfy social goals. Social cohesion and mutual benefit were secured through practices of redistribution of produced goods. Under the new capitalist mode of production and trade in England, society was made to serve the self-regulating market (chap. 3-6). According to Polanyi, factory production (which also often required use of energy-dense fossil fuels) was an essential precursor to this monumental shift (1944/1957, pp. 40-41 & 57). It is important to note that the rise of the market as *the* primary focus for social organization and production had shaped the character of colonial relationships as well.

Capitalist ideologues have argued that the impetus for detailed division of labor in capitalist production, as distinct from the social division of labor,[5] as discussed by Braverman (1974, p. 70) and others (see also Ollman, 1971; Wallimann, 1981, chap. 6), is about efficiency, but it is not. It is about control of the production process and the centralization of that control with a new class of factory owners and managers. Kropotkin (1902/1989) recognized the social power inherent in the craft guilds of medieval European cities wherein artisans directly controlled the production process and also controlled the entry of new artisans into particular crafts (chap. 5-7). By contrast, under the capitalist paradigm, the work of artisans was broken down into myriad different pieces so that anyone could be hired to do it, or better yet, machines could do it independently. This change wrested control away from artisans (Kropotkin, 1902/1989, chap. 7-8), who had been dispersed throughout society, and concentrated it in the hands of capitalists. This great transformation of society created new forms of social dependency in England that were early incarnations the enforced dependency that would come to characterize the world-system and that would reach its apex during late capitalism.

The concept of the world-system is perhaps most closely associated with sociologist Immanuel Wallerstein (1974, 1976, 2003, 2005, 2006, 2007, 2008a, 2008b). In his world-system approach to global political economy, Wallerstein explains how and why the capitalist system has produced an uneven form of development comprised of core, periphery, and semi-periphery nations and regions. The core areas are those that have benefited the most from capitalist globalization. These nations and regions are able to exert their influence on other parts of the world-system in order to capture disproportionate shares of international wealth and power. Periphery zones often had been colonies of core nations from which colonizers extracted natural resources needed for industrial production. As a result of their colonial history, these areas lack strong central governments and diverse economies. Semi-peripheral nations are exploited by core powers while themselves exploiting the periphery zones; these nations and regions often embody tension between a strong central government and a domestic landed elite. Within the world-system of late capitalism, relationships among nations and regions resemble those of the colonial era, but without direct political control of the periphery by the core (Wallerstein, 1974, 1976). It is important to note that, as part of the crisis of late capitalism, *core* is becoming less a geographic reality as the power of transnational corporations and global finance increasingly eclipses that of nation states (see Harvey, 1989).

Within the world-system, nations and peoples who were conquered during the worldwide wave of European colonization remain at a competitive disadvantage in the globalized world (Wallerstein 1974, 1976). The purpose of a colony to an empire after all is not to achieve its own self-sufficiency and resilience; it is to provide resources for the colonizing power. It can be argued that the power relationship between colonizer and colonized is intentionally maintained at an imbalance wherever possible by the forces of empire (Miller, 1999). The essentially extractive economies of the colonies embody a more or less direct throughput of energy and matter with

[5] The social division of labor, according to Braverman (1974, p. 70), is differentiation of work based upon age, sex, and physical strength. Walliman (1981, p. 89) and Ollman (1971, p. 160), drawing upon the work of Marx, emphasize that the division of labor in capitalist society, unlike the social division of labor, is characterized by a division between mental and material labor. Ollman (1971) further states that "the division of labor whereby people do only one kind of work and rely upon others to do whatever else is necessary to keep them alive is a more inclusive social expression of man's alienated productive activity" (p. 159). It can be argued that alienated and detailed division of labor enforces dependency in the sense discussed in this chapter.

little diverse use and reuse of resources and human capital. Jane Jacobs (2000) emphasizes how diverse uses and reuses of matter and energy in an economy are essential to its diversification and resultant resiliency, just as the diverse use and reuse of matter and energy flows is critical to development of diverse and resilient ecosystems (pp. 43-63). Economic relationships, structured as they have been between colonizers and colonies, have offered few possibilities for colonies to develop economic resiliency and, thereby, to revoke their peripheral status. Even after independence was won by or granted to former colonies, they were left at a disadvantage in terms of economic diversification and resilience, industrial development, knowledge relevant to modern technology, modern infrastructure development, ownership of intellectual property, and more. According to Stiglitz, African aspirations following independence have gone almost entirely unfulfilled (2002, p. 5).The Global South has been invited to play in the global economy, but the field has remained tilted in the direction of those who inherited the legacy of the colonizers (Miller, 1999).

Fossil fuels have played an important role in creating and deepening the divisions among core, periphery, and semi-periphery zones. Beginning with the industrial revolution and continuing into the late capitalist era, energy-dense fossil fuels, offering initially high net energy yields, created incredible opportunities for increasing human activities at very little cost, especially for those nations with abundant domestic supplies of these resources. First coal and later petroleum increased the speed and efficiency with which new lands and peoples could be colonized, in turn yielding up an increasing variety and quantity of natural and human resources to fuel the fires of capitalism and concentrate the wealth of the world in the hands of the colonizers. Those who had the early lead technologically were best positioned to take advantage of these new energy sources (Heinberg, 2005, chap. 2).

In order to understand the intensity and global pervasiveness of the capitalist drive to enforce dependency, it is important to understand that late capitalism is in fact a *world-system*. Increases in international political and economic equity and localized gains in self-sufficiency would fundamentally alter the character of the system and its ability to serve the dominant through concentrating wealth and power in their hands. Socio-economic equity and sustainable self-sufficiency would cancel the dependency enforcing factors of the world-system and unchain the masses from service to a system that entraps and depletes them through channeling their energies and diverting their resources to serve dominant groups.

We now turn to explore how several important aspects of the political economy of late capitalism contribute to enforcing dependency within late capitalist globalization. Each of the aspects of the system discussed below interrelates in numerous ways with other aspects of the overall system. Therefore, specific aspects of the system identified here can serve as various lenses through which we view the whole of late capitalism as a system of enforced dependency. Additional dependency enforcing aspects of the system exist; however, the following discussion addresses aspects of late capitalism that create some of its furthest reaching effects, both geographically and in the sense that these aspects serve as deeply structural foundations for the enforced dependency of neoliberal globalization.

How Money and Debt Enforce Dependency

According to economist Richard Douthwaite (2004), the money system creates enforced dependency because currency is supplied from outside the community, which requires communities to sell to outside markets at prices determined externally (p. 116). Our current money system also enforces dependency because it is based on debt (Douthwaite, 1999a, chap. 1, 2004, p. 118; Rowbotham, 2000, pp. 90-102).

The debt-and-interest-based money system requires infinite economic growth in order to avoid currency collapse so that, once we are hooked on money, we are hooked on economic growth. With debt-based money as a foundation for the global economy, growth is requisite for nations and for the global economy as a whole. Since infinite economic growth within a limited system (the earth) is a defining contradiction of the capitalist world-system (Daly, 1999; Douthwaite, 1999a, pp. 25-26, 1999b; Kovel, 2002, chap. 3-4 & 6), it is important to understand how and why money is created in local, national, and global contexts as well as to understand possible reforms and innovations in the creation and use of money that could encourage and support sustainable living. We will also explore how the modern debt-and-interest-based money system creates unsustainable dependence on the self-destructive global economy that is consuming its own base as a function of economic growth (Kovel, 2002, chap. 3-4 & 6). Richard Douthwaite's *The Ecology of Money* (1999a) explores how the way modern money is created influences the social and ecological effects of its use. Douthwaite's arguments call for, among other things, (re)localization of some forms of currency creation and use as a strategy for sustainability. Much of our discussion in this section draws upon Douthwaite's arguments.

In our efforts to comprehend how the money system contributes to enforced dependency, we begin with an explanation of the functions of money. Money serves three key purposes: it serves as a medium of exchange, as a store of value, and as a unit of account. These functions can conflict with each other. In an inflationary environment when prices are rising, the store of value function of money decreases, and people tend to spend money rather than saving it since they assume prices will be even higher later. In a deflationary environment when prices are falling, the medium of exchange role of money is curtailed. People see money as a good store of value and tend to hold onto it since they assume they will be able to buy more with it later. In both cases, the reactions of people to price changes tend to reinforce the given cycle of inflation or deflation and further inhibit one of the functions of money. Therefore, modern money does not function optimally and simultaneously as both a medium of exchange *and* a store of value (Douthwaite, 1999a, pp. 11-12, & 27-28).

Money functions no better as a unit of account. An analysis of the processes of cost-benefit analysis illustrates this point. Since money has no fixed value with regard to anything tangible, its use as the basis for quantification in cost-benefit analyses opens the door for manipulation of these analyses to suit desired outcomes. Since cost-benefit analysis relies on the conversion of future costs and benefits to net present values (a process of "discounting" estimated cash flows from future costs or benefits by a chosen rate of compounded interest), present costs and monetary profits are emphasized over benefits and costs that could potentially occur in the long term. The rate at which profits made today are assumed to be able to grow or at which future costs lose their economic significance (the discount rate) is a crucial factor in coloring these analyses to encourage or discourage a given project or extractive enterprise. In cost-benefit analysis, present profits are favored over similar profits foreseen in the more distant future, a function of the time value of money estimated through use of the discount rate. The tendency to value present over future profits intensifies with increases in discount rate used in the analysis. Cost-benefit analysis can be used to justify projects that will yield profits now, even if they are projected to have significant costs in the distant future (Douthwaite, 1999a, pp. 29-30). In cost-benefit analysis, it is also difficult to include costs or benefits such as human and environmental health, aesthetics, ecosystem integrity, cultural survival, and long term sustainability that can be difficult or impossible to quantify monetarily (Moore, 1995).

The time value of money, along with the dependency of modern people on money, create a framework for decision making in which people are encouraged to exploit and consume each other and nature for short-term financial gain -- especially when the costs of doing so are unquantifiable or are likely to occur in the long rather than short term. The process of exploitation for profit further distances people from each other and nature and thereby increases dependency on money as a means to satisfy material, social, and service needs, and this increased dependence in turn drives and further deepens the cycle of exploitation for profit. Modern money contributes to enforcing dependency upon the capitalist system. In today's societies, since most of us do not own or have access to enough land or other resources to produce for ourselves what we need to survive, we are dependent upon money as the vehicle through which we satisfy many of our basic needs and aspirations. Therefore, we are dependent upon the institutions that create the money we need for day-to-day life.

Commercial banks create most of modern money by lending out more money than they have on deposit, a process known as fractional reserve banking. Money created in this way exists purely as a function of borrowing. When loans are repaid, the money created by these loans ceases to exist. People must continually engage in borrowing in order to maintain money in circulation (Douthwaite, 1999a, pp. 16, & 21-22; Heinberg, 2005, pp. 187-190; Rowbotham, 2000, p. 90). The process of fractionalization is repeated with borrowed money when money lent by one bank is deposited into another, in which case money that was created from nothing in the first place is treated as a tangible basis for further fractionalization (Douthwaite, 1999a, p. 20; Rowbotham, 2000, p. 15). The assumption is that all depositors will not converge on a bank at once demanding the full value of their deposits (Douthwaite, 1999a, p. 17; Hudson, 2005, p. 18). The loan-to-deposit ratio through which commercial banks create money is typically governed by the central bank to which the commercial banks report. Central banks use this and other mechanisms to control the money supply in an effort to control inflation/deflation (Douthwaite, 1999a, pp. 18-20). The value of modern money is determined solely by its acceptability to others -- it is backed by nothing but acts of faith (Douthwaite, 1999a, p. 21; Heinberg, 2005, p. 188).

Due to the way most money is created in this debt-and-interest-based system, we are directly or indirectly *dependent* upon the existence of debt in order to have money available at all. When we realize that debt is actually what allows us to have money in circulation, it comes as no surprise that borrowing is encouraged so heavily in consumerist societies. As anyone who has ever been in debt knows, the need to service the debt and the consequences that would follow from not doing so constrain one's choices and actions. As people living in a society with a debt-and-interest-based money system, we are highly dependent on a form of money that allows us to obtain needed goods and services while, at the same time, the very need for this money and the socially entrapping way that it is created impinge upon our life choices and actions. In reality, most of us have little choice but to participate in, and thereby support, the money system, and the participation of each one of us strengthens both the overall system and its ability to imprison us.

Not only are we dependent on a money system that encourages and reinforces our dependency, the mechanisms within the overall economic system that support the value of money and prevent currency collapse are themselves quite fragile. The potential for economic depression is ever present since many circumstances can create an atmosphere in which people are unwilling to take out new loans. Unless effective measures are taken in time as a downturn threatens, layoffs typically result from the slowing of economic activity and the concomitant reduction in the overall supply of money. Layoffs further deepen the economic downturn and increase the unwillingness of people to borrow money. The velocity of money circulation in such an atmosphere is likely to drop since even the wealthy may feel uncertain of their economic future and hold onto their money, thereby deepening the cycle still further. The system that results from creating money through debt is therefore an inherently unstable one upon which to build an economy (Douthwaite, 1999a, pp. 22-23).

One particular form of debt, national debt, also influences the money supply and creates its own forms of enforced dependency. National debt entails the government going into debt to cover the difference between taxes levied and expenditures made. Michael Rowbotham describes the process of using government bonds to finance the national debt:

> When government bonds are bought by the nonbanking sector, funds held in various savings institutions (pension, life assurance and trust funds etc.) are brought back into everyday circulation, the sums being re-distributed into the economy through public services and other spending. Thus, monies relied upon for future payments are recycled into the economy, in parallel with a debt undertaken by the government, and registered against the nation's assets. However, when government bonds are bought by the banking sector, additional money is created since the purchase is made against, or using, the bank's fractional reserve. Just as with private/commercial debt, additional bank credit is thus created and new deposits of bank credit result. (2000, p. 96)

The mechanism of national debt used to finance public sector activities, including social services, creates interdependencies among the savings and banking institutions, the national government, and citizens for whom government services are performed, and all of these entities are also made dependent upon economic growth to generate needed tax revenues to keep the national debt from spiraling out of control, which could trigger a currency crisis.

Dependency of individuals, communities, and entire nations on debt-and-interest-based money is also enforced through trade. In order to assemble the means to trade or otherwise engage in the global economy using commercial-bank-created money, one must borrow funds from a commercial bank and agree to repay the loan plus interest, or one must sell goods and/or services to others who pay with currency. Profits from lending activities of commercial banks flow to their central offices. Therefore, repayment of loans held by nonlocal banks creates a systematic drain on local economies through interest paid and through the resources of the local economy being traded away for money to service these debts (Douthwaite, 1999a, p. 21; Shuman, 2000, pp. 107-120). A co-dependency is established through which individuals, communities, and even nations -- through their borrowing activities -- help produce profits for corporate banks upon which they depend for access to the money they need to provide for themselves and to satisfy their economic aspirations. This co-dependency is further deepened by modern living patterns in which people are removed from land and other ecosystemic sources of their own sustenance and most often must rely upon global supply chains through which they purchase the necessities of life.

To summarize, we have noted several ways in which debt-and-interest-based money contributes to enforced dependency. The economic system, due in part to the way money is created, is inherently constraining to human choice and activity and is always vulnerable to self-reinforcing economic downturns. The money system itself also tends to concentrate wealth and power in large banks that continually siphon away the material wealth of communities to which they do not belong. The loans provided by these banks do allow individuals and groups to engage in trade and other economic activity through which they might support themselves and benefit their communities, but the fruits of a significant portion of their efforts flow away from them and their local communities in the form of repayment of loans to non-local corporate banks (Shuman, 2000, pp. 107-120). We see that the ability of these banks to create money therefore represents an important form of power and control. Any person or entity willing to accept a given currency increases the power and control of the nation, institution, or organization that created it (Douthwaite, 1999a, 2004, pp. 115-116). The need to obtain money for purchasing necessities, in particular, creates important forms of social dependency since necessities such as food and water are just that – they are *required* for life itself.

International finance and debt also contribute in important ways to a multivalent world-system of enforced dependency. International debt contributes to creating and maintaining an imperialist political economy which, for the former colonies of Western powers, creates relationships and experiences similar to colonialism but without the overt political conquering of lands (Miller, 1999). We will explore below in the section on the Bretton Woods paradigm how structural debt in the Global South contributes to political and economic enforced dependency of Global South nations on the world-system of globalization (Rowbotham, 2000). We will also consider below how dollar hegemony, initially enforced through the Bretton Woods system, produces economic benefits for the United States at the expense of other nations and thereby contributes to ultimately unsustainable forms of co-dependency in international finance and debt.

When we understand how money is created and used, we begin to see how the banking system is operating under a rentier's regime through which the financial sector skims a portion of the interest created from the debt-and-interest-based money system – a system that was made possible through government. By virtue of their ability to engage in mortgage lending, banks also hold title to vast amounts of real property which can be claimed in the event of borrower default (Rowbotham, 2000, p. 186).

We now turn our attention to economic growth as a dependency enforcing aspect of the capitalist system.

Economic Growth

As we have seen, the industrial capitalist mode of production and debt-and interest-based creation of money undergird the tendency of global capitalism toward exploitation and its requirement for growth, both of which are unsustainable. As I argue above, once we are reliant upon money to provide for our needs, we are also reliant upon the growth required to keep that money in circulation. Interest must be paid on bank-created money, which means that the value of sales in the economy must grow in order to avoid system collapse. The growth necessary for repayment of loan principle plus interest can be realized through inflation, through increased output, through capturing market share from others, or through a combination of these strategies. The money supply must also grow continually in order to accommodate the overarching need for economic growth within the world-system and to allow interest to be paid (Douthwaite, 1999b, chap. 2).

Since growth in output cannot continue infinitely within the finite ecological system of the earth, the requirement for economic growth that is built into the debt-and-interest-based monetary system is inherently unsustainable (Daly, 1999; Douthwaite, 1999a, p. 25, 1999b, chap. 15; Homer-Dixon, 2006, pp. 200-201; Kovel, 2002, part I; Meadows, Randers, & Meadows, 2004). Vandana Shiva claims that growth is “theft from nature and people” (Shiva, 2000, p. 1). Every job, every product – even in the “information economy” -- relies on the extraction and use of natural resources, including human resources. The growing money supply, that is a structural requirement of the system, is the result of continual expansion of money lent into circulation. Servicing the loans that create ever growing amounts of money requires continually expanding production and, therefore, continually expanding use of nature and people in the process of production. The global growth economy is currently bumping up against both natural limits and the limits of the capitalist system to contain its own contradictions.

We get a clearer picture of the exponential character of the growth built into the current capitalist system through examining the rule of 72. This mathematical rule of economics allows one to estimate the time to double of an interest-earning investment. It states that 72 divided by the interest rate per period equals the number of periods to double. Therefore, an investment accruing eight percent interest annually would double in nine years, and if the doubled money were to be left invested at the same rate, it would double yet again in another nine years. The rule of 72 applies to debt as well. A debt on which interest is owed that is left unpaid will double in size in the same way as an investment earning interest. According to the International Labor Organization (2005), the global economic growth rate for 2004 was five percent which means that, at that continued rate of growth, the global economy would double in slightly less than 14 and a half years. When one considers that all future doublings occur based upon an exponentially expanding base, the power of the required growth in the global economic system becomes evident.

This need for growth is also a primary driver to the neoliberal obsession with opening markets in parts of the world that have not yet been fully dominated by commercialized living. It is also a primary driver behind the systematic destruction of subsistence cultures wherein one could live -- albeit usually very modestly in terms of material wealth -- independently from the money economy. When systems of subsistence are destroyed, increasing numbers of people are forced into dependency upon the modern capitalist system of commercial distribution of commodities. As Shiva (2000) claims, growth is theft from people of systems of self-determination and independence and the replacement of these systems with ones of enforced dependency. Left unchecked, global capitalism will continue to destroy the few remaining subsistence cultures in an effort to satisfy the global economy's appetite for new consumers and natural resource inputs.

The push for growth that drives the opening of new markets globally also requires that people everywhere be subjected to a barrage of advertising to convince them to purchase and consume ever more products. In the United States, increased consumption has been heavily encouraged in recent decades, though this spending spree has been fueled by crushing levels of consumer debt (Clark, 2005, p. 11). The easy credit provided to consumers in the United States temporarily ameliorated the effects of global overproduction while also continuing and deepening enforced dependency globally.

Furthermore, technological advantages that have developed historically mean that growth is not evenly distributed in the global economy. Producers who lag behind competitors in use of new technologies tend to see their profit margins shrink when compared to early adopters who innovate successfully because the new production methods typically decrease production costs and place downward pressure on prices. In such an atmosphere, only very large producers who have been able to innovate early can survive the heightened competition. These large producers then capture market share by driving their former competitors out of business, and they further the tendency of the global market to force everyone everywhere to use many of the same materials and products (Douthwaite, 1999b, chap. 2, 2004, pp. 116-117). These monopoly tendencies decrease the resilience of local communities to both economic shocks and ecological disturbances. In food production, for example, local plants and plant varieties and locally adapted breeds of animals disappear, and the diversity they represent is often lost forever. This lack of diversity in production creates dangerous vulnerabilities, as demonstrated by the Irish potato famine in the nineteenth century. It also places increasing pressure on a defined set of natural resources. In more localized economies that existed prior to globalization, local materials and local flora and fauna were used to satisfy local needs. Today, even for those local resources that remain, local production for local use is often uneconomic when compared to purchasing materials and products from large global suppliers.

Of course, this process of creating global monopolies and monocultures depends upon the availability of cheap fuel for transport, a precondition whose satisfaction is increasingly in doubt (Campbell & Strouts, 2007, part 1; Deffeyes, 2001; Douthwaite, 2004, p. 118; Heinberg, 2005; Kunstler, 2005; Roberts, 2004; Simmons, 2005). As noted above, fossil fuel dependency may yet prove to be the Achilles heel of modern globalization since global production of petroleum is likely to peak prior to 2015. If we are to continue the economic growth on which the global economy is based, we will need an ever expanding supply of dense energy that is convenient to transport and store and capable of fueling our transportation infrastructure – and it appears increasingly unlikely that we will discover a means to capture sufficient energy sources that possess these qualities.

The global growth economy concentrates wealth and power while creating dependence. It also creates and deepens dependency while reducing socio-ecological resilience. It manifests path dependence in that, as the system continues through time, changing course becomes increasingly difficult because the cultures, resources, flora, and fauna on which alternate, steady-state, localized living patterns might be (re)constructed are increasingly damaged, destroyed, and exhausted in the process of achieving economic growth. All the while, the capitalist growth economy increases the vulnerability of communities and societies to economic shocks and ecological breakdown.

We now turn our attention to examine in more detail a specific and important source of both loss of resiliency and increasing dependency within the global economy: technological displacement of labor. We will also examine how this displacement drives the need for economic growth.

Technological Displacement of Labor and Elimination of Subsistence in the Growth Economy

According to Thomas Homer-Dixon, technological displacement of labor provides an important rationale for the fixation of policy makers and power brokers on maintaining economic growth. He summarizes thusly the logic of economic growth as a remedy for technological displacement of labor:

> In essence … the logic underpinning our economies works like this: if we're discontented with what we have, we buy stuff; if we buy enough stuff, the economy grows; if the economy grows enough, technologically displaced workers can find new jobs; and if they find new jobs, there will be enough economic demand to keep the economy humming and to prevent wrenching political conflict. Modern capitalism's stability – and increasingly the global economy's stability – requires cultivation of material discontent, endlessly rising personal consumption, and the steady economic growth this consumption generates. (2006, p. 196)

But, according to Homer-Dixon, "Conventional wisdom [about the role of technology in displacement of workers and as a stimulus for new kinds of jobs] rarely acknowledges the scope and relentlessness of technological displacement of workers" (2006, p. 195). Furthermore, displaced workers do not necessarily get the same pay in new jobs. In the United States, for example, where the manufacturing sector has largely been outsourced, former manufacturing workers have in many cases been forced to seek comparatively lower-paying service jobs (Clark, 2005, pp. 10-11), and those jobs that do offer high pay -- in new industries and using new technologies -- often require skills and knowledge that displaced workers do not have (Homer-Dixon, 2006, p. 195). Technological displacement of workers may, in the end, prove unsustainable and ultimately destabilizing to the capitalist system. Displaced workers are typically already dependent upon money and the market for fulfilling basic needs, and their displacement typically further narrows their scope for freedom and self-sufficiency. Through technological displacement of workers, control is further concentrated in the hands of business owners and managers who are interested in increasing their own shares of the profits, but in an overarching and long term sense, because the widespread phenomenon of technological displacement of labor erodes the purchasing power of the masses, the relationships of enforced dependency between business leaders and workers are ultimately self defeating to both.

The post-war Green Revolution serves as an example of an especially important form of dependency creation. The industrialization of agriculture contributed to divesting people of access to land as a basis for subsistence, thereby resulting in their dependency upon the money system. This process is, in part, technological displacement of subsistence producers by industrial agriculture, but it is also cultural and political in nature. As we will explore in more depth below, major institutions, rules, and practices of the global economy contribute to self-perpetuating and self-reinforcing systems of power and exploitation that systematically advantage the capitalist First World over the Global South.[6]

Technological displacement of labor and modern displacement of subsistence cultures are important sources of enforced dependency globally. Since these forms of displacement place downward pressure on wages and cause unemployment, they contribute to the need for consumer debt in the global economy as a means to maintain demand. Consumer dept, as noted above, is an important source of enforced dependency. By systematically undermining self-sufficiency and reducing wages, technological displacement of labor and modern displacement of subsistence cultures increase the concentration of wealth, power, and social control that enforce dependency of people everywhere upon the global economy.

We now turn to discuss some important aspects of neoclassical economic thought that contribute to enforcing the dependency of global populations.

The Hegemony of Neoclassical Economics

One could claim that mainstream economists serve as agents of dependency enforcement. In society at large, the powerful disproportionately control which ideas circulate widely and in high places and, to a large extent, control the approval mechanisms for those ideas that get branded as truth. The vast majority of neoclassical economists have nodded in approval to a system that has created crippling and permanent debts in the Global South, debts that represent failures of modern economics (see Rowbotham, 2000 and Stiglitz, 2002). They have also promulgated the myth of the self-regulating market. We see the folly of this myth amidst the fallout of the crisis of capitalism visible through the lens of the continuing economic downturn and turmoil that began in fall of 2008.

Reliance on incomplete models and statistical instruments that do not approximate complex reality gives economics the appearance of an objective science when, in fact, the very assumptions and rules embedded in the economic system are themselves political. According to Stiglitz (2002), standard formulas used in macroeconomics do not take unemployment into account:

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[6] In chapter five, I will explore in greater depth how the industrialization of agriculture enforces dependency. I will also examine the roles of the industrialization of agriculture in the differentiation of powers within the post-war world-system.

> In some of the universities from which the IMF [International Monetary Fund] hires regularly, the core curricula involve models in which there is never any unemployment. After all, in the standard competitive model – the model that underlies the IMF's market fundamentalism – demand always equals supply. If demand for labor equals supply, there is never any *involuntary* unemployment…. The problem cannot lie with markets. It must lie elsewhere – with greedy unions and politicians interfering with the workings of free markets, by demanding – and getting – excessively high wages. There is an obvious policy implication – if there is unemployment, wages should be reduced. (p. 35)

According to Rowbotham, the vast majority of academic economic literature contains little to no analysis of debt or money (2000, p. 15). We see from the arguments presented in this paper that unemployment, falling wages, and the monetary and debt systems are critical factors in enforcing dependency among populations worldwide. Because these receive little scrutiny from academic economists or economists working in government and prominent banks worldwide, we might assume that markets *are* working perfectly in the view of capitalist elites, or at least that they have generally been doing so.

The IS-LM model of macroeconomics is a useful case in point. The IS-LM model is the standard formula of current macroeconomic analysis used to manage economies through fiscal and monetary policies (Daly & Farley, 2004, p. 278). It contributes to the hegemony of the capitalist order in which capital accumulation is *the* goal. This model renders issues of environmental and social health, unemployment, distribution of wealth, and dependency indirectly visible at best, and it also indirectly enforces dependency.

The IS-LM model hinges on the concept of achieving economic equilibrium in two areas: 1) savings (S) and investment (I) (the "real sector") and 2) liquidity preference (L) and money supply (M) (the "monetary sector") (see Daly & Farley, 2004, chap. 16 for a detailed explanation of this model). All values considered in achieving this equilibrium are monetary values, meaning that many considerations related to intangible human values, quality of life, ecosystemic health, and socio-ecological sustainability are accounted for indirectly at best -- through whether and how they affect the money supply and the uses of money in human societies.

In the standard macroeconomic view encoded in the IS-LM model, human beings are regarded as rational economic beings – *homo economicus* – for whom the *central* questions of *value* in the choices made by individuals are *economic* choices. *Homo economicus* is driven by competition to maximize his/her share of goods and services at the lowest possible cost. Choices made by *homo economicus* are not rational in any overarching ethical sense; they are rational only within a narrowly economic view of the world in which capturing material wealth is the only goal that "counts" (see Spretnak, 1997, pp. 219-221). This system of values inherent in neoclassical economics was both history and culture specific to Western capitalist societies, but it has now become encoded in the world-system of globalization.

That the IS-LM model remains a tool of choice among macroeconomists demonstrates the hegemony of capital in management and policy making worldwide. Use of this model as the "workhorse" of macroeconomics (Daly & Farley, 2004, p. 279) means that alternate values to capital accumulation are virtually absent from economic management and considerations of economic policy. What is of most interest to capitalists – capital – receives focused attention in economic decision making while other interests -- even those that, left unattended to, ultimately threaten the long term viability of the capitalist order -- receive little to no attention.

Perhaps the most important point to understand about the IS-LM model with regard to socio-ecological sustainability is that natural limits and social health and resilience are invisible to the model except in the ways that these limits translate into prices, availability and costs of labor, and other monetized transactions. When the model is unaffected by clear price signals -- even in the face of impending socio-ecological disaster -- economic equilibrium can be pursued and possibly achieved -- if only for a time. This is exactly the process that is occurring with regard to oil and gas. As noted above, we are living off of the draw-down of these natural resources. Price signals are unclear, and when they happen, they occur far too late for us to prepare for living under conditions of constrained supply. Meanwhile, macroeconomic policy makers continue to use tools such as the IS-LM model that are blind to resource limits.

Another aspect of neoclassical economics that belies its hegemonic orientation is the tendency of mainstream economists to subscribe to the cornucopian argument discussed above with regard to oil. This argument holds that when shortages appear, price signals trigger innovation which, in turn, creates substitutes for whatever resource is scarce. In neoclassical economics, therefore, the value of every input to production can be monetized. As members of indigenous subsistence cultures learned long ago, one species of animal or plant or the presence of clean water can be irreplaceable within a culture and an ecosystem. In such a society, the notion of infinite substitutability would be considered insane, but this idea continues to fuel the continued hegemony of the capitalist order today, even in the face of impending and severe shortages of depleting resources that are essential to the modern economy. In modern capitalist society, the idea of infinite substitutability is hegemonic in that it helps perpetuate the existing economic order, but this idea is certainly not sustainable.

The management of inflation and deflation by policy makers is also hegemonically-oriented. A brief explanation reveals this orientation. Inflation is characterized by rising prices; disinflation is characterized by slower than expected inflation, and deflation is characterized by falling prices. Inflationary periods benefit debtors with loans at fixed interest rates because the real value of their repayment drops. Conversely, inflation negatively impacts the real income of creditors. Disinflation tends to positively impact creditors because expected inflation has not occurred, making the value of repayments, in effect, higher than expected. Deflation can benefit creditors so long as it does not continue long enough to cause a depression and greatly increase withdrawals of bank deposits while also causing loan defaults. Both disinflation and deflation typically cause unemployment and lead to a net transfer of national income to creditors (the wealthy and banking interests) (Daley & Farley, 2004, pp. 291-294). Given the constituency of the U.S. Federal Reserve (bankers and other wealthy interests) for example, it is easy to see why that agency demonstrates an anti-inflation policy orientation (Daley & Farley, 2004, p. 301).

Nearly always, it is capitalist elites (those who were able to pursue expensive educational training in elite universities and those who possess or can obtain the capital necessary to increasingly distance themselves from the world's growing poor populations) who advise highly placed decision makers or who undertake important economic policy decisions such as management of inflation. As members of a hegemonic class, they tend to serve the economic interests of themselves and their economic and social allies, and they employ tools such as the IS-LM model and economic "common sense" such as a strongly anti-inflation policy stance in their advisory roles. This is not to say that all macroeconomists and elite capitalists are part of a vast conspiracy to dispossess the middle and lower classes. Although many knowingly do seek economic advantage through any means possible, including brutal exploitation of other people and the environment, others engage in the world from positions of power with the intent of maintaining their relative social position but without an explicit intent of inflicting harm. Others are intellectually blinded to the damage done through use of hegemonically informed tools such as the IS-LM model. After all, they learned to use such tools when they were students in respected institutions of higher learning. Whatever the conscious intent behind their actions, elite economic policy makers tend to reproduce and the cultural hegemony of the capitalist order.

In order to have a sustainable world, we must fundamentally change our culture and its systems of valuation and exchange. Formulas such as the IS-LM model that place distance between analyzing the health of the economy and the health of humans and nature are part and parcel of the cultural landscape of neoclassical economics and capitalist society as a whole. One must recognize that economists who use these formulas are embedded in the capitalist culture which, according to the rules which constitute the system, privileges the economic interests of international elites over the wellbeing of others and the health of the environment. This system also privileges mainstream economists who serve the entrenched interests of the economic/political elite over radical economists who advocate change.

We have seen how neoclassical economics is indeed political in that it supports the hegemony of capitalist elites through perpetuating a narrow and hegemonic worldview. We have seen also that the capitalist values undergirding neoclassical economics directly conflict with socio-ecological sustainability in that they promote exploitation and the drawdown of critical resources, and we have recognized the virtual blindness of macroeconomic modeling to issues of socio-ecological sustainability. Given this understanding, one can see why the hegemony of neoclassical economics among prominent economic thinkers contributes to enforced dependency through privileging the worldview and interests of elite capitalists in the global economy. Below, we will discuss specific examples of how the worldview and interests of the privileged have been encoded in the structures and rules that govern the global economy and enforce dependency.

We now turn our attention to the post-war Bretton Woods institutions and monetary system, both of which are informed by neoclassical economics. We will see how the Bretton Woods paradigm contributes in important ways to enforcing dependency within the world-system.

The Bretton Woods Paradigm

In this section, we explore how the post World War II economic paradigm established at the United Nations Monetary and Financial Conference, held at Bretton Woods, New Hampshire, in July 1944, undergirds a global system of enforced dependency. John Maynard Keynes -- whose reflationary economics formed the foundation for the New Deal and whose policies are typically credited with ending the Great Depression -- is often incorrectly credited as the architect of the Bretton Woods institutions. In fact, his proposal for an International Clearing Union (ICU) was rejected by the American delegation prior to the conference (Rowbotham, 2000, pp. 13, & 37-45). Keynes' Clearing Union, had it been implemented, would likely have greatly reduced the enforced dependency inherent in post-war international finance and debt. In this section, we will examine how and why debt in the Global South is a structural feature of the Bretton Woods economic paradigm.

We begin our exploration by contrasting what might have been with what in fact are the central organizing institutions and features of the Bretton Woods paradigm. The Bretton Woods conference served as a forum for the allied nations to devise strategies and institutions to aid in financing the rebuilding of Europe after the war, to facilitate post-war international trade, and to prevent future economic depressions. At this time, most colonies of the industrialized West had not yet gained independence (Stiglitz, 2002, p. 11). The Bretton Woods delegates created the framework for the World Bank and the International Monetary Fund (IMF), two institutions that have dominated Global South development ever since. The IMF, which began operation in 1945, was created to provide an international financial pool of funds upon which member countries could draw to help resolve temporary balance of payments deficits that threatened the stability of their currencies (Rowbotham, 2000, p. 35). At Bretton Woods, the U.S. proposed the creation of the International Bank for Reconstruction and Development that would become known as the World Bank. This institution would lend to developing nations and to countries working to rebuild their economies that were shattered by the war (Rowbotham, 2000, p. 43; World Bank, 2010). The foundation for the General Agreement on Tariffs and Trade (GATT), which came into force in 1947, was also laid at Bretton Woods (Kaplinsky, 2005, p. 14).

In his proposal for an ICU, Keynes, head of the British delegation, focused on the need to avert macro-economic destabilizing effects of trade imbalances. Recognizing that balance of trade surpluses and deficits were self-reinforcing, he hoped to avoid some nations becoming permanent creditors and others permanent debtors. Keynes argued that creditor nations experience boosts in demand for production and an influx of money, which in turn spur further investment and the seeking of additional markets for exports, while debtor nations see their domestic industry and agriculture fall into a self-reinforcing cycle of recession as their home markets are eroded by imports and their currency is drained abroad (Keynes, 1941/1980, pp. 42-66; Rowbotham, 2000, p. 37; Vegh, 1943). These self-reinforcing cycles, if continued indefinitely, can eventually create a contradiction of oversupply in an atmosphere of constrained demand that cannot be easily resolved.

Keynes' proposed ICU was designed to promote greater equity among nations by virtually eliminating trade imbalances. He proposed an international currency, the bancor, to be used for all international trading. A nation would accrue bancors by exporting, and importing would result in debits to a nation's bancor holdings with the ICU. Nations would be encouraged to maintain a zero balance in their ICU bancor-denominated accounts (Keynes, 1941/1980; Vegh, 1943). Since bancors could only be redeemed through international trade and would otherwise be worthless and because both net creditor and net debtor nations would incur minor fines as a result of carrying positive or negative balances, nations would be encouraged to spend rather than save bancors. By reducing incentives to generate a surplus of trade, the ICU would promote equity in the distribution of the benefits of production within highly productive countries. Without such a system, a few people in surplus producing nations typically benefit greatly from capturing and investing foreign money earned through exports, while most people involved in surplus producing economies, in effect, work to export their wealth to other nations. ICU benefits to nations running a temporary trade deficit were equally apparent: they would not experience a net outflow of their national currencies to purchase imports and, therefore, would avoid currency destabilization and recession that would result from a negative balance of trade. Through the ICU, both net creditors and net debtors would be encouraged to restore the balance of trade (Rowbotham, 2000, pp. 39-40).

The ICU proposed by Keynes would have promoted greater self-sufficiency and self-reliance within the word-system and would therefore have promoted system resiliency and sustainability as compared to the current system in which imbalances of trade are allowed to self-perpetuate. Had Keynes' proposal carried the day at Bretton Woods, we would be much less likely to see wealth so intensely concentrated in the hands of the international elites and transnational corporations who benefit directly from the enforced dependency of imbalanced trade and Global South debt, both of which are used to leverage the capital and financial dominance of transnationals and wealthy capitalists within the world-system.

The very potential of Keynes' proposed ICU to promote equity, both within and among nations, was resisted by the United States and its capitalist leaders who saw America emerging as a superpower following World War II. Britain, represented by Keynes, was in decline at this point, and its productive capacity had been severely impacted by the war. The United States, on the other hand, had seen its productive capacity rise as a result of the war, and its infrastructure and factories remained intact. With the U.S. having recently emerged from the Great Depression, the American delegation was concerned with maintaining and expanding U.S. trade surpluses as an outlet for American productive capacity and a vehicle for avoiding a post-war recession (Rowbotham, 2000, p. 41; Vegh, 1943).

The U.S. proposal made at Bretton Woods centered on conducting international trade in a free market using national currencies. Under this proposal, nations running a trade surplus would be under no obligation to expend their surplus earnings by purchasing the exports of debtor nations. The U.S. proposed creating the IMF as a stabilization fund to which all nations would contribute according to the size and vigor of their economies. The Fund would hold reserves of all national currencies proportional to the relative strength of their economies. Any nation that experienced a negative balance of trade which threatened to upset its economy could borrow from the Fund on a short term basis in order to avert an economic downturn or currency crisis (Rowbotham, 2000, p. 43). The stabilization provided by the IMF would also prevent future global depressions since IMF loans would provide the liquidity necessary to maintain aggregate demand in the global economy. Loans would also encourage countries to maintain employment during an economic downturn so as not to compound existing problems (Stiglitz, 2002, pp. 12 & 196).

According to the American proposal, nations running trade surpluses would be allowed to accumulate these surpluses and would be able to exchange them for gold held by debtor nations. The American delegation claimed that, using gold as the international currency meant establishing a neutral currency, but since the U.S. held at least 70% of all world gold reserves at the time, the American delegation also insisted that gold should be valued in dollars and that all other currencies should be valued relative to the dollar. This currency policy became known as the gold exchange standard. The convention eventually adopted the U.S. proposal. In the case of Great Britain, a U.S. war loan was made conditional upon agreement to the American proposal. With the approval of the U.S. proposal at Bretton Woods, the dollar, in effect, became an international currency (Dormael, 1978; Rowbotham, 2000, pp. 43-44).

Securing the dollar as the sole international currency bestowed certain advantages upon the U.S. It could run trade deficits and still maintain the acceptability of its currency – as long, that is, as confidence in the dollar remained stable and national gold reserves remained high enough to satisfy demands by foreign countries to convert their dollar holdings to gold. America's negative balance of trade during the Vietnam War, eventually did produce circumstances in which international confidence in the dollar waned and the countries of the world increasingly converted their dollar reserves to gold, to the point that it seemed the U.S. might not be able to honor its gold exchange requirements. At this point in 1971, the Nixon administration unilaterally ended exchanges of dollars for gold and thereby ended the Bretton Woods gold exchange standard, but the dollar has continued to serve as a world reserve currency for several reasons noted below in the section on dollar hegemony (Hudson, 2005, pp. 22-25).

At Bretton Woods, the stage was set for a post-war world-system which carried forward in time the inequities imposed during the period of European colonization and which deepened the enforced dependency of nations in the Global South that would gain independence during this period. As we will discuss in more detail below, when the U.S. succeeded in its bid to create a system that would allow it to maintain its trade surpluses, it ushered in an era of increasing concentration of wealth and power and intensifying enforced dependency of nations that would become mired in unpayable debt. When the U.S. succeeded in making its national currency the de facto international currency, it also laid the groundwork that would allow it to manipulate other nations of the world into financing its debt. The Bretton Woods agreement, through its refusal to enforce a balance of trade among nations and its promotion of laissez-faire trade, ensured the economic supremacy of the U.S. and sealed the fate of nations in the Global South as perpetual debtors (Rowbotham, 2000, p. 46). These successes of the U.S., however, also set in motion processes that would eventually lead to a crisis of capitalism in the global economy: overproduction in an atmosphere of declining purchasing power in important centers of consumption such as the U.S. and widespread, crushing national and consumer debt in the U.S. and Europe. In fact, the political success of the U.S. in getting other people and nations to finance its standard of living and its defense spending have created a situation in which the world, faces a growing potential for currency crises in many nations, including the U.S., that could completely destabilize the global economy. We will explore these issues in more depth below in the section on dollar hegemony.

Neoliberalism: Deepening Enforced Dependency

In this section, I analyze how the neoliberal economic regime has intensified tendencies inherent in the Bretton Woods institutions to enforce dependency of Global South nations within the world-system. We will see that the IMF, the World Bank, and post-war free trade regimes often drive and support the enforced dependency of former colonies on the industrialized West.

We will see how debt enforces the political and economic subservience of Global South nations to the industrial powers and how loan conditionalities force debtor nations to offer up at bargain prices their natural resources, labor, and industrial and infrastructural assets. We will see how the advantages gleaned through this system by dominant powers and groups become self-reinforcing and self-perpetuating and how systemic inequalities among nations breed complex forms of dependency -- not only for nations and citizens of the Global South, but also for those of the First World.

It is important to emphasize that enforced dependency did not begin with the neoliberal era, nor even with Bretton Woods. The relative positions of winners and losers in the current world-system were in many cases established during the colonial period, and one can reach even further back in time to locate people, circumstances, and resources that contributed to creating current inequities. The neoliberal era, however, provides a most glaring example of raw political force wielded to the advantage of the powerful and wealthy at the expense of others.

The neoliberal political wave has washed over the world energized by economic rhetoric and policies that, at best, thinly disguise a worldwide, systematic process of consolidating economic and political power (see Harvey, 2005). Though it is difficult to document that given people, institutions, and nations *intended* to create a world-system that looks and behaves like the one we have today, it is possible to show how international policies, practices, and institutions have, by and large, systematically advantaged the proponents and enforcers of the neoliberal regime at the ultimate expense of almost everyone else. Many significant advantages for proponents of neoliberalism have been secured through the actions and policies of the Bretton Woods institutions -- the IMF and the World Bank -- working in concert with GATT and the World Trade Organization (WTO). In this section, we will focus on the policy content and practices of the IMF, the World Bank, and GATT/WTO as prime examples of dependency enforcing agents of global capital. We will see how the forms of dependency enforced through these institutions systematically reduce the resilience, not only of debtor nations, but of nations and peoples everywhere, making neoliberal political economy among the biggest threats to local and global socio-ecological sustainability.

According to David Harvey (2005),

> Neoliberalism is in the first instance a theory of political economic practices that proposes that human well-being can best be advanced by liberating individual entrepreneurial freedoms and skills within an institutional framework characterized by strong private property rights, free markets, and free trade. (p. 2)

In the neoliberal era,[7] which began in the 1980s, three central factors have driven a new era of globalization and furthered enforced dependency: conditionalities imposed by the IMF and World Bank in their lending processes, increasingly aggressive free trade agreements, and the

[7] In 1979, Paul Volcker was named Chairman of the Federal Reserve in the U.S., and he ushered in a set of monetary policies designed to fight inflation no matter the costs in terms of unemployment or other forms of social dislocation. Margaret Thatcher was also elected Prime Minister of Great Britain in 1979, and Ronald Regan was elected President of the United States in 1980. Spreading from these focal points of power and policy, neoliberalism became an organizing framework for the global economy (Harvey, 2005, p. 1).

increasingly blunt use of political and economic power wielded by nations issuing world reserve currencies (first and foremost among these being the U.S.). The power flowing to the U.S. from international use of the hegemonic dollar proved particularly instrumental in terms of U.S. influence. However, in the globalized era, the economic power of nations has been progressively eclipsed by that of transnational corporations that have captured the political leadership within nation-states and have thereby used national and international politics as platforms for extending their global investments and increasing their profits (Rowbotham, 2000, p. 47). As Stiglitz notes, in the neoliberal era, "the West has driven the globalization agenda, ensuring that it garners a disproportionate share of the benefits, at the expense of the developing world" (Stiglitz, 2002, p. 7). Under neoliberalism, structural inequalities built into the Bretton Woods paradigm have contributed in significant ways to creating a world-system in which the economic and political position of nations in the Global South approximates that of colonies with regard to First World corporate interests. Peripheral nations perpetually depend on forms of economic assistance that deepen and enforce their dependency upon the very institutions, corporations, and nations that strip them of the infrastructural and business assets, jobs, decision making power, natural resources, and social support that could serve as bases for creating more free, self-sufficient, and sustainable societies. This dependence also further weakens their relative economic position with regard to powerful transnational corporations and First World nations (Greider, 1997; Kaplinsky, 2005; Manley, 1987; Perkins, 2004; Rowbotham, 2000; Stiglitz, 2002).

The lopsided world-system of enforced dependency that derived from Bretton Woods gained further momentum during the neoliberal era under the political leadership of Great Britain and the U.S. We will now more closely examine the ideology undergirding the neoliberal agenda for globalization.

Neoliberalism is an extreme form of market fundamentalism that gained worldwide prominence in the 1980s when it became the economic platform of British Prime Minister Margaret Thatcher and U.S. President Ronald Reagan. Neoliberal ideologues believe in small government and in the ability of a self-regulating market to serve effectively as the ultimate arbiter of economies and of all social life. Neoliberals promote privatization of all or nearly all public industries, services, and functions; capital market liberalization; and the removal of all barriers to trade. In promoting free trade, neoliberal policy makers have been known to oppose government regulations of all kinds, including those that safeguard environmental and human health and that regulate working conditions and wages (Achbar, et al., 2004; Black, 2001; Harvey, 2005; Moyers, 2002). Liberalization is supposed to stimulate the economy by moving resources from less to more productive uses, but it has often destroyed jobs as a result of international competition. In the manufacturing sector, for example, corporations seeking production cost advantages in terms of wages, regulations, productivity, and other factors may relocate their production facilities in order to maximize profits, thereby causing unemployment in communities left behind. This footloose behavior of capital in an era of free trade also places downward pressure on the sovereign rights of nations to create and enforce environmental and labor regulations (Achbar, et al., 2005; Black, 2001; Shuman, 2000, chap. 2).

In the 1980s, with Margaret Thatcher at the helm in Britain and Ronald Reagan as President in the United States, the IMF and the World Bank became "missionary institutions" for neoliberalism (Stiglitz, 2002, p. 13). A "purge" occurred at the World Bank that redirected the

Bank's efforts toward reducing the power and role of government while increasing privatization and free trade (Stiglitz, 2002, p. 13). Although the objectives of the IMF and the World Bank remained distinct, their activities in any given country became increasingly intertwined. The World Bank began to provide "broad-based support in the form of structural adjustment loans" but only did so following IMF approval, and the IMF, originally created to assist on a short term basis during an economic crisis, became involved in long-term development policy in countries experiencing perpetual states of crisis (Stiglitz, 2002, pp. 13-14). According to Stiglitz (2002), the neoliberal policies of the IMF in particular became dogmatic and expressive of a naïve faith in markets to self-correct so that the institution came to see liberalization as an end in itself (pp. 31-32). Prime Minister Thatcher touted ideology as fact in her claim that "there is no alternative" to the neoliberal agenda (Douthwaite, 1999b, chap. 5).

According to Stiglitz (2002), the neoliberal ideology that permeated the policies of the IMF beginning in the 1980s contradicted the both the ideas upon which that institution was founded and the stated goals of its programs:

> Over the years since its inception, the IMF has changed markedly. Founded on the belief that markets often worked badly, it now champions market supremacy with ideological fervor. Founded on the belief that there is a need for international pressure on countries to have more expansionary economic policies – such as increasing expenditures, reducing taxes, or lowering interest rates to stimulate the economy – today the IMF typically provides funds only if countries engage in policies like cutting deficits, raising taxes, or raising interest rates that lead to a contraction of the economy. (pp. 12-13)

Furthermore, it takes capital and entrepreneurship to create new firms and jobs needed to end an economic crisis, and the austerity programs and high interest rates imposed by the IMF in the neoliberal period have resulted in a lack of both (Stiglitz, 2002, p. 59). We will address below the specific content and processes of the structural adjustment programs referenced by Stiglitz. It is important to note that, historically, the U.S. government played a central role in developing its strong domestic economy, but Global South nations have been effectively denied the opportunity to do the same under the neoliberal paradigm, in many cases because they are subject to the economic and political influence of the IMF and the World Bank (Stiglitz, 2002, p. 21).

The ideology of neoliberalism has also been unevenly applied by the IMF, thereby increasing the relative position of strength of the First World in relation to the Global South. The influence of the IMF extends well beyond those countries that have loan agreements with it. In accordance with Article four of its charter, The IMF generates annual reports for every nation in the world in order to verify that each is adhering to the agreement under which the IMF is organized. According to Stiglitz (2002, p. 48), because these reports are used as a means of grading a nation's economy, they serve as ideological vehicles for advancing the neoliberal agenda. Peripheral countries have to pay attention to this grading in order to avoid frightening away current and potential investors while core countries can ignore them (Stiglitz, 2002, p. 48).

In an overarching sense, economic policy guided by neoliberal ideology is also highly exclusionary to vast numbers of people worldwide because adherence to neoliberal doctrine by policy makers tends to increase the income gap between rich and poor within nations and among nations.[8] These gaps are also an indication that many Global South societies have become mired in perpetual states of debt, underdevelopment, and maldevelopment (Homer-Dixon, 2006, p. 192; Manley, 1987; Robotham, 2000). Furthermore, according to former World Bank economist Partha Dasgupta, ideological support for growth economics and trade liberalization (by the industrialized world, major international development banks, and national governments worldwide) has encouraged practices based on economic theories that overlook impacts on the environment and on intertemporal human wellbeing. Dasgupta identifies how application of neoliberal economic theories can produce situations in individual nations where economic and social development occurs according to standard means of measurement -- typically the gross domestic product (GDP) -- at the cost of drawing down or damaging natural resources and human wellbeing. For such nations, long term prospects for future generations are negatively impacted in exchange for economic growth *now* (Dasgupta, 2001). Thus, neoliberal policies enforced through the IMF and the World Bank in many cases circumscribe the resilience and sustainability of communities and nation states.

According to Homer-Dixon, neoliberal globalization also failed to produce promised growth in middle-income countries, and some of the countries that are deemed success stories in terms of achieving economic growth actually protected their economies from free trade:

> Middle-income countries hardly gained at all, including those in Latin America that aggressively privatized state-owned industries and opened their borders to trade and investment. Also, some of the countries that grew the fastest – … including China and India, but also Malaysia and Chile – actively protected their economies using capital controls and trade barriers. (2006, p. 192)

It can be argued that economic globalization has benefited transnational corporations selling high-value-added goods and services globally (Homer-Dixon, 2006, p. 192). Benefits enjoyed by these entities may well derive from "excessive political lobbying and representation by powerful commercial interests" in global and regional free trade and regional economic block organizations such as the WTO and the European Union (Rowbotham, 2000, p. 3). Such lobbying occurs with regard to World Bank and IMF policies and loans as well (Rowbotham, 2000, p. 3). For example, global water corporations have been actively consulted by World Bank officials in the process of developing agreements for financing water projects (International Consortium of Investigative Journalists [ICIJ], 2003).

Stiglitz's (2002) offers an insightful summary of his observations on IMF policies and procedures as central, epitomizing phenomena of neoliberal globalization:

[8] It is important to note that some countries such as China have both successfully captured market share in many areas globally and grown their economies during the neoliberal era. Kaplinsky's (2005) empirical analysis of global trade demonstrates that these gains create a de facto reduction of similar opportunities for other nations. Therefore, although some national economies have attained a relative level of success during the neoliberal era of free trade, rising economic activities for one nation or business have come at the cost of reduced opportunities for others due to systemic overcapacity in production and the resulting squeeze on prices (Kaplinsky, 2005). Neoliberalism, therefore, is not a tide that lifts all boats. It is also important to note that China's trade successes have been supported by keeping the Chinese currency at an artificially low value, thereby creating a positive atmosphere for exports. This practice has taken place in a global atmosphere of neoliberalism, but it is quite contrary to neoliberal doctrine.

> [At the IMF,] decisions were made on the basis of what seemed a curious blend of ideology and bad economics, dogma that sometimes seemed to be thinly veiling special interests. When crises hit, the IMF prescribed outmoded, inappropriate, if 'standard' solutions, without considering the effects they would have on the people in the countries told to follow these policies. Rarely did I see forecasts about what the policies would do to poverty. Rarely did I see thoughtful discussions and analyses of the consequences of alternative policies. There was a single prescription. Alternative opinions were not sought…. Ideology guided policy prescription and countries were expected to follow the IMF guidelines without debate…. These attitudes … often produced poor results [and were] antidemocratic. (pp. xiv-xv)

Here, Stiglitz describes a market fundamentalist approach to neoliberal economic policy and practice. He also points out an important aspect of neoliberalism: that it is entirely distinct from political democracy. During recent decades, neoliberal leaning politicians have conflated individual freedom and democracy with free markets. Below, we will explore in more depth how neoliberal ideologues promote free market strategies that actively undermine democratic processes -- placing freedom of the market over freedom of people to govern themselves.

We will now embark upon an exploration of exactly how neoliberal dogma was applied in practice in many countries as a condition of receiving economic development and economic stabilization loans.

Structural Adjustment Programs and Loan Conditionality

Systems of international finance and debt enforce the dependency of many debtor nations upon first world banking interests, thereby insuring that these nations remain in line economically and politically with the agenda of neoliberal globalization led by the First World. Similar and simultaneous critiques can be leveled at the IMF and the World Bank since, during the neoliberal period, these institutions have evidenced a high degree of integration at the policy level and have often combined their efforts within given countries. World Bank development loans have often been made available on the condition that an IMF structural adjustment program was on track. At times, the World Bank has even sought IMF endorsement of its loan agreements (Rowbotham, 2000, p. 49). It is important to acknowledge that the bulk of foreign debt incurred by Global South nations is commercial and created through fractional reserve banking. These funds, therefore, are not lent from one *country* to another. Still, it is important to elucidate how the loan policies and strategies of the IMF and the World Bank embody neoliberal ideology, especially since these policies influence commercial lending strategies to debtor nations. Commercial loans are not generally forthcoming to nations that are not also supported by the IMF and/or the World Bank (Bradshaw & Huang, 1991, pp. 323-325; Rowbotham, 2000, pp. 49 & 98).

We begin our exploration of IMF and World Bank lending as embodiments of dependency enforcing neoliberal ideology by exploring how loan conditions and structural adjustment programs (SAPs) tend to create economic recessions while, at the same time, undermining debtor nations' ability to address the social and economic causes of recession. We will explore how and why debtor nations find themselves trapped in a perfect storm of needing funds from the IMF and the World Bank while, as a condition of receiving needed funds, they must continually erode the domestic social and economic foundations from which a healthy domestic economy might be built. Borrower nations find it difficult to escape this trap, and they become increasingly vulnerable to economic and political exploitation – a classic case of enforced dependency.

Countries can experience economic crises for many reasons. During the post-war period, IMF stabilization and World Bank development loans were sought by many peripheral nations burdened by legacies of colonialism and enforced dependency. These countries have in recent decades become characterized by large poor populations concentrated in and around cities (see Davis, 2006, and Araghi, 1995). These populations have suffered the destabilizing effects of both depeasantization and the neoliberal drive to open markets. The difficulties faced by nations attempting to deal with these problems are compounded by downward pressure on profits of latecomers to technological advancement (Douthwaite, 1999b, chap. 2), downward pressure on the prices of commodities in a global market (see Kaplinsky, 2007), international harmonization and enforcement of intellectual property policies (Garcia, 2004; Shiva, 2000 & 2005; Stiglitz, 2002, pp. 7-8), cultural imperialism, Bretton-Woods-induced systemic trade imbalances, unfair agricultural subsidies provided to U.S. farmers (Norberg-Hodge, et al., 2002; Shiva 2000, 2005), aggressive international free trade agreements, use of nonlocal currencies that systematically deplete communities (Douthwaite, 1999a, 2004), and ecological and health crises. These factors conjoin within neoliberal globalization to thwart socio-economic investment in the Global South.

Since the 1980s, the World Bank and the IMF have made their loans contingent upon debtor nations deploying sweeping structural adjustment programs. Enforcement of structural adjustment as a condition for receiving IMF and World Bank loans serves to integrate debtor nations into the world-system in ways that advantage transnational corporate and financial interests in the First World at the expense of the economic and social interests of citizens in the Global South. Although external conditions such as virtual monopoly status of transnational corporations, global commodity price variations, aggressive exporting, and protectionism practiced by industrial nations can destabilize a nation's recovery from economic crisis (Rowbotham, 2000, p. 58), these nations are held solely responsible for repayment of IMF and World Bank debt. This fact tends to reinforce their dependence on external loans to address economic problems that may be less national than global.

According to Rowbotham (2000), the ideology of "structural adjustment is based on the assumption that the cause of each nation's debt crisis lies entirely within its own economy. The economy must therefore 'adjust' to the wiser world economy" (p. 55). We have recognized above that the opposite is often true: many of the crises debtor nations face result from legacies of colonialism and from external pressures deriving from the ability of core entities within the world-system to secure for themselves positions of relative advantage.

Structural adjustment programs most often entail all or most of the following: fiscal austerity (including reductions in public services such as publicly supported education, job training, and healthcare as well as the cutting of subsidies provided to the poor for obtaining the basics of life such as food, water, and transportation), raising taxes in order to pay external debts, privatization of public industries and services, elimination of barriers to trade, liberalization of capital markets, and currency devaluation (making a country's products cheaper to the outside world but more expensive to their own citizens) (Black, 2001, Manley, 1987; Robbins, 1999, p. 106; Stiglitz, 2002, p. 53). These policies almost always lead to recession or worse (Stiglitz, 2002, p. 38).

Additionally, strings attached to debt can be political in nature. Jamaica provides an example of a nation whose political philosophy with regard to economic policy was a casualty of debt crisis. Jamaica's leftist and Third-World-solidarity-oriented economic and political philosophy as well as its resource politics (modeled on OPEC as a resource cartel) with regard to bauxite (from which aluminum is extracted) were all but obliterated as a result of its near currency collapse. Jamaica sought a stabilization loan from the IMF, and the strings attached to this loan radically rerouted the political path of that nation toward closer integration with the neoliberal economic project while reinforcing Jamaica's peripheral status within the world-system (Manley, 1987; Black, 2001).

Loan conditions imposed by the IMF and World Bank often undermine democratic decision making in Global South nations and thereby undermine political and social coherence that could improve a nation's ability to advance self-determined domestic and international social and economic policies. These conditions also typically prevent a nation from securing the public funding necessary to carry through progressive domestic social and economic policies. According to Stiglitz, for countries in dire need of credit, "Unless the IMF approves the country's economic policy, there will be no debt relief. This gives the IMF enormous leverage…." (Stiglitz, 2002, p. 43). According to Rowbotham (2000), using their financial leverage, the IMF and the World Bank have been known to assume roles that circumvent the policy making roles of sovereign nations:

> Structural adjustment has seen teams of World Bank and IMF economists virtually taking over the economies of debtor nations in an attempt to 'turn them around'. Exchange rates, government spending, labour laws, domestic deficits, taxation, welfare programmes, land tenure, environmental regulations, wage cuts and public service cuts – all of these have been subject to detailed requirements and constant scrutiny. (p. 56)

The depth and breadth of prescriptive SAP policies alone reveal them as antidemocratic. Furthermore, the IMF and World Bank reveal their willingness to engage in antidemocratic processes in order to enforce neoliberal SAPs when they bar citizens from participation in negotiations and refuse governments permission to reveal to their citizens what loan agreements entail (ICIJ, 2003; Stiglitz, 2002, p. 51). According to Stiglitz (2002), antidemocratic conditions can apply to the national governance process itself. He notes that "in some cases, the agreements stipulated what laws the country's Parliament would have to pass to meet IMF requirements or 'targets' – and by when" (pp. 43-44).

To make matters worse, these antidemocratic policies have not served to benefit debtor nations economically:

> The first World Bank structural adjustment programmes (SAPs) were in Kenya, Turkey and the Philippines in 1980. None is a success today and the United Nations Economic

> Commission for Africa in 1993 found fifteen African countries clearly worse off after structural adjustment than before. (Rowbotham, 2000, p. 56)

Structural adjustment, rather than benefiting debtor nations, enforces their dependency on the world-system by perpetuating and deepening economic crisis. In Africa, SAPs have nearly always resulted in widespread unemployment, declining real incomes, economically damaging levels of inflation, capital flight, persistent trade deficits, rising levels of external debt, the destruction of the social safety net, and de-industrialization (Rowbotham, 2000, p. 57; Stigltiz, 2002, p. 46).

These realities point out that the assumption that free markets and freedom go together is a fallacy. The IMF and the World Bank do not facilitate blossoming economies in free societies but serve to enforce the dependency of client governments who, albeit sometimes quite unwillingly, force the will of more powerful economic and political interests onto their nations. The fact that the IMF has used a "boilerplate," one-size-fits-all approach to developing its loan agreements and that it has sought little input from outside experts or from national officials familiar with the countries in question (Stiglitz, 2002, pp. 47-48) demonstrates that its political agenda is driven by *outside* interests. The IMF claims it does not dictate the terms of its loan agreements, but they tend to wield the power in one-sided negotiations because a country seeking an IMF loan is facing an immediate crisis and therefore is in desperate need of assistance (Stiglitz, 2002, p. 42).

Staged dispersal of loan funds serves as yet another tool for international lending agencies to dictate and enforce neoliberal SAPs. Under a staged dispersal arrangement, if a country does not stay on track and meet specific economic and policy tests and targets, disbursement of loan installments will be halted midstream (Rowbotham, 2000, p. 57). Sometimes meeting designated targets and tests actually reduces a country's ability to repay its IMF debt, so that the conditions imposed cannot be justified in terms of the Fund's banking objectives (see the example of Korea in Siglitz, 2002, pp. 44-45) but are revealed for what they are: global policy tools.

In the case of the World Bank, a large proportion of money lent to individual nations for infrastructure projects tends to be used to hire foreign contractors with the expertise necessary to successfully design and create infrastructure and other development projects. Therefore, since jobs are created wherever the borrowed money is spent, jobs resulting from development projects in the Global South are often created in the First World. Due to varying economic, political, and social contexts, some degree of domestic economic growth may or may not materialize from investment in these projects, but in any case where foreign contractors are hired or where long term management contracts are awarded to transnationals, global corporate interests benefit a great deal from these loans while individual debtor nations are stuck with the debt (Robbins, 1999, pp. 101-107). The World Bank has also repeatedly required privatization of state industries and services as a condition for loan approvals, a process which usually results in the creation of profit making opportunities for transnational corporations (ICIJ, 2003).

According the Stiglitz, there are several reasons for the failure of conditions to stimulate development. One reason is that loans create fungibility that may be poorly utilized: funds designated for a specific purpose free up funds that may be spent poorly elsewhere. He also cites poorly conceived conditions that deepen the economic crisis at hand together with the political unsustainability of policy initiatives as possible reasons for the failure of loan conditions to promote development. The political unsustainability of imposed policy initiatives likely derives from the public perception of these conditions as political and economic intrusions by a colonial power (Stiglitz, 2002, p. 46).

There are, however, some economic growth success stories of IMF policies. Botswana, for example, averaged more than 7.5 percent growth in the period 1961 to 1997 (Stiglitz, 2002, p. 37). But one must question whether these success stories have produced socio-ecologically sustainable and economically resilient societies. In some cases, nations that secured loans to address an economic crisis or to undertake development succeeded mainly at enriching their ruling elite (Stiglitz, 2002, p. 52), thereby enforcing internal dependency. The debt with which these nations continue to struggle also serves as an important and continuing source of their vulnerability to exploitation by core entities within the world-system. Enforcing peripheral status may in fact have been a goal of IMF and World bank lending. At least, it seems resilience and self-sufficiency were not primary goals of this lending. According to Rowbotham (2000), "The persistent and cumulative failure of the theoretical model that encouraged developing nations to 'borrow/invest/export/repay' suggests the nature, terms and context of loans to the Global South have been such as to render these inherently unpayable" (p. 31).

It is important also to recognize that monies lent through the World Bank and the IMF are largely created for this purpose. The World Bank creates and sells bonds to commercial banks. In this way, it generates funds for lending similarly to the way a nation generates spendable funds through creation of national debt. In the case of the IMF, that institution requires 25 percent of its quotas deposited by member countries to be in the form of gold. The other 75 percent can be in the national currency. To generate these deposits, national governments regularly create them by selling bonds, thus increasing the national debt. The IMF can also administer loan packages offered through commercial banks (Rowbotham, 2000, pp. 100-101). Thus, Global South debt is much more an obligation to the financial sector within industrialized nations and less a debt owed to the *nations* of the First World. Indebted nations are therefore dependent upon the global financial sector, the area of the global economy that has come to dominate all others in terms of growth, rendering it a formidable political and economic force.

We will now explore the dependency enforcing aspects of implementing some specific conditions imposed through IMF and World Bank lending. We will also examine how free trade and the requirement of debtor nations to earn foreign exchange to pay their debts contribute to enforcing the dependency of nations in the Global South.

Fiscal Austerity

Fiscal austerity as a condition for loan agreements can include all or some of the following: reduced government spending, increased taxation, requirements to reduce national and/or international debt, and requirements to raise interest rates. According to Stiglitz (2002), IMF austerity programs have included demands to raise interest rates to as high as 20, 30, 50, or even 100 percent, a practice that makes domestic business investment virtually impossible (p.

59). Although these strategies may help to reverse a currency crisis in the short term, they create a poor foundation for social and economic development. Reduced government spending can yield such outcomes as near-complete disappearance of the social safety net, negative impacts to the reach and quality of education, reduced ability to address environmental problems, and reductions in the government's ability to stimulate domestic small business development. These impacts obviously reduce a nation's potential to prepare its citizens for occupations other than those in the low-skill manufacturing and service sectors. This lack of social investment, therefore, virtually condemns a nation to dependence on core entities within the world-system as suppliers of high-tech products and services, and the debtor nation loses out on developing its citizens' potential to earn the kind of wages paid to highly skilled workers. Furthermore, the government loses out on the taxes that could be generated by a higher percentage of its population engaging in skilled work, and this low tax base reinforces the government's inability to undertake social programs. Increased taxation -- especially when combined with reduced social services such as unemployment benefits and subsidies[9] meant to ensure access to the basics of life – places stress on people living under marginal circumstances already, and it may force some into abject poverty, virtually eliminating their chances to contribute to economic development in the future. Paying down national and international debt diverts money toward creditors and away from potential social investment. Raising interest rates slows the economy and makes it more difficult for consumers to purchase durable goods and homes, to start or expand businesses, or even perhaps to continue business operation. The economic slowdown caused by rising interest rates reduces the tax base and increases the need for social services at a time when just the opposite is needed.

All of these strategies applied simultaneously in a fiscal austerity package are more likely to cause economic recession or even depression than to stimulate development. A nation caught in a cycle of debt and being forced to implement fiscal austerity as a condition for loan approval is in a difficult position indeed. Such a country is likely to see its ability to implement domestic policy objectives and its control over its domestic economy systematically eroded, especially if it is forced to enter many successive loan agreements or to renegotiate its debt. Countries caught in such a trap suffer from enforced dependency (see Black, 2001, and Stiglitz, 2002).

Export-led Development

Loans made to Global South nations by the IMF, the World Bank, and large commercial banks are denominated in world reserve currencies. Therefore, in order for a nation to pay debts to these banks, debtor nations must earn foreign exchange by trading with First World nations. Export led development represents a means of earning the necessary foreign exchange, and export-led development strategies have been a foundation of World Bank and IMF thinking since the late 1950s (Rowbotham, 2000, p. 50).

Since former colonies that once served as the raw materials plundering grounds for their conquerors rarely have developed as producers of a wide range of advanced, technologically complex products, Global South nations typically export raw materials, commodities such as agricultural and mining products, and relatively simple manufactured products on a large scale.

[9] In Botswana, IMF-prompted removal of subsidies for food and kerosene undertaken as part of a wide ranging austerity program triggered riots (Stiglitz, 2002, p. 77).

When an individual country sells its raw materials and other products in the competitive global market, the price earned for these products falls to that of the lowest cost provider (Douthwaite, 2004, pp. 114-115). Rising production of export commodities by debtor nations pursuing export-led development strategies also places intense downward pressure on prices (see Avramovic, 1986). Furthermore, Kaplinsky (2005) notes that prices for exported commodities have declined relative to imports of manufactured goods (pp. 57-60).[10] Kaplinsky (2005) also notes that, in a globally competitive market, the lower the technological intensity of a given product, the more likely its price will fall (pp. 184-185). When one considers that typical Global South domestic commodities and products have relatively little value added compared to the complex products of the First World, one realizes that the playing field of the global market is not at all level.

One might argue that complex products are manufactured in many Global South countries, but as Kaplinsky (2005, pp. 60-65) demonstrates when exploring the reasons for demise of a garment producer in the Dominican Republic, if the production processes are easily reproducible elsewhere, transnational producers will often relocate to take advantage of production cost savings made possible by global competition -- for example, a currency devaluation in another country. Furthermore, since factory production in the Global South tends to take place in facilities owned by First World transnationals, debtor nations often do not realize expected benefits of production taking place within their borders because profits won are mostly repatriated by First World corporate interests. These corporations may contribute relatively little to a peripheral nation's efforts to earn foreign exchange, especially since many of the factories they operate in Global South nations reside in tax-free zones (Achbar, et al., 2005; see also the Dominican Republic example offered by Kaplinsky, 2005, p. 60).

A focus on exports also often interferes with the domestic economy of the exporting nation (Rowbotham, 2000, p. 152). The harnessing of domestic production as a means of earning foreign exchange diverts resources and production capacity that could otherwise be used to support the domestic population. The export focus enforced through IMF and World Bank loan agreements therefore tends to increase the dependency of domestic populations in the Global South on the world-system for the provision of basic needs. This situation is especially egregious in the case of export-oriented agricultural production in nations whose people are hungry. Export crops are grown on land monopolized by agribusiness instead of growing crops that could feed the people (Rowbotham, 2000, p. 7).

According to Rowbotham, "The obligation on debtor nations to direct an increasing proportion of their resources and economic effort to the export market has long been recognised as one of the primary causes of poverty and lack of internal development in the emerging nations" (2000, p. 6). According to David Korten (2001), in Brazil, between 1960 and 1980, the conversion of small land holdings used to grow food for domestic consumption to agribusiness production of export crops displaced 28.4 million people, and in India, 20 million people were displaced over a 40 year period due to large scale development projects (p. 55). The

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[10] Kaplinsky's (2005) study of trade between Global South countries and the U.S., however, demonstrates that, although the relative price of exported commodities to imported manufactured goods declined, increased levels of commodities exports resulted in absolute gains in income generated from export activities. This finding, however, does not mean that alternate economic strategies could not have generated even higher levels of income, and it does not take into account that commodities exports can come with high environmental and social costs (pp. 204-205).

displacement of subsistence farmers and indigenous communities enforces new dependencies of the displaced upon the wage labor system – and upon the economic resources of their government, especially in the event that they remain under- or unemployed. These new and often desperate dependencies among a nation's citizens may add to the urgency of the national government's efforts to secure loans, thereby increasing the nation's dependency on the world-system.

Global South debt implies an imbalance of trade. Repayment of loans through export-led development would mean generating a trade surplus, which would also mean that at least some of the nations that had previously enjoyed a trade surplus would have to accept increased exports from debtor nations and see their own surpluses reduced or converted to deficits (Rowbotham, 2000, pp. 36-37). This scenario is politically and economically unacceptable to core powers within the world-system. [11] Export-led development, rather than being a way out of debt, contributes in important ways to the perpetuating the debts of many nations in the Global South.

Free Trade

Under the Bretton Woods agreement, free trade was given high priority. The requirement to promote free trade of goods and services worldwide through removal of restrictions to trade was written into the charters for both the IMF and World Bank. "Countries were … permitted to seek a persistent trade surplus. The balance of international trade was left to 'free market commercial forces'" (Rowbotham, 2000, p. 46). In the neoliberal era, removing barriers to free trade has become a standard condition for obtaining a loan from the IMF or the World Bank. Free trade is purported to level the playing field in the global market through the removal of protectionist policies such as tariffs and subsidies, but as we shall see, free trade policies tend to favor First World nations and transnational corporations at the expense of the Global South.

As economic protections are removed, weak economies are exposed to competitive forces they often cannot withstand, especially in market areas where economies of scale are achieved through applying capital intensive production methods (Douthwaite, 2004, pp. 114-115). Western industrialized nations have also at times pushed for trade liberalization for products they export but have resisted liberalization in areas where it would have negatively impacted their own economies (Stiglitz, 2002, p. 60). For example, the U.S. has pushed Global South nations to eliminate barriers to trade whilst maintaining its own trade barriers in agriculture, thereby preventing Global South producers from exporting some of their most abundant products and depriving them of export income (Stiglitz, 2002, p. 6). These trade arrangements systematically disadvantage Global South businesses which often have neither the capital nor the domestically produced technology to get ahead.

Free trade regimes also undermine the ability of national and local powers to regulate industries in the areas of social justice and environmental protection. Intense competition among

[11] It is important to note that the U.S. is an exception to this statement. It runs an extremely negative balance of trade of a magnitude that would not be desirable or possible for other industrialized nation. The U.S. has also become the nation with the world's largest debt. This situation is possible because of the status of the U.S. dollar as a world reserve currency -- and the only currency with which oil can be purchased from OPEC countries. We will further explore below reasons why the U.S. is able to run up huge debts without (as yet) facing a currency crisis.

large corporations combined with competition among debt ridden countries seeking the opportunity to earn foreign exchange constrain possibilities for regulation in areas such as the minimum wage, working conditions, and environmental protection (Moyers, 2002).

Free trade also paves the way for further concentration of wealth in the hands of transnational corporate entities who can more easily achieve capital intensive economies of scale and undercut their competitors with low prices, thereby driving many smaller producers out of business (Douthwaite, 2004, p. 117). In gaining needed financing for capital investment, transnationals receive favored treatment that intensifies the concentration of wealth and power:

> Size helps multinationals access capital, since they are generally able to obtain credit more easily, at lower rates of interest and on a more advantageous terms. Size also grants multinationals an advantage over smaller businesses when it comes to withstanding the pressure of debt. Banks and other lending institutions are less likely to foreclose on large debts to Big Business than they are on small business debts. (Rowbotham, 2000, p. 156)

As it turns out, the purported mutual gains to be achieved among nations from specialization and trade in the globalized world-system are only possible in an atmosphere of full employment. In an atmosphere of significant structural unemployment, some producers are unlikely to find markets for their products. Transnationals that can move their manufacturing base to take advantage of production cost savings reinforce the system of globalized production and trade by large-scale producers, making it nearly impossible for smaller producers to capture market share. Structural excess in production capacity and structural unemployment reinforce these phenomena by placing downward pressure on prices at the same time that labor saving technologies contribute to unemployment. Under the current circumstances, those countries that succeed in export-oriented development do so at the expense of less efficient producers elsewhere. Globalization creates winners and losers, and the poverty and inequity that compound enforced dependency are integral to the process of globalization itself (Kaplinsky, 2005, pp. 230-231 & 235).

Because it places downward pressure on prices, free trade also advantages wealthy consumers over poor producers (Douthwaite, 2004, p. 114), but the wealth advantages of globalization reaped in core nations are likely to be temporary: “As corporations seek low-cost opportunities in the debtor nations, the wealthy nations export jobs abroad and suffer an influx of cheap products that destroy home markets” (Rowbotham, 2000, p. 6). The United States has witnessed the dissolution of its manufacturing sector as a result of these economic forces so that the foreign exchange earned by debtor nation sales to U.S. customers often occurs through American consumers slipping ever deeper into debt (Clark, 2005, pp. 10-11).

Free trade creates enforced dependency both within and among nations as it intensifies the concentration of wealth and power within the world-system, thereby depleting increasing numbers of individuals, families, communities, and nations who have, at the same time and paradoxically, become dependent on the global economy for their living.

Privatization

IMF and World Bank loan requirements prompt nations to privatize public utilities, services, and infrastructure, thereby creating opportunities for which transnational corporations may be uniquely positioned due to their ability to obtain credit and, in some cases, due to their technological advancement and prior experience running large scale, technically complex industries and services. Privatization of basic services such as water reinforces the power and reach of global corporate interests by handing them both new business opportunities and captive markets. The continual privatization of the commons, particularly commons that serve basic needs, raises the question of how those without money will fulfill their survival needs. It also raises the question of who will speak on the behalf of nature. Privatization tends to further concentrate wealth and power in the hands of a few while enforcing the dependency of the economically weak who are forced to obtain the basic necessities from transnationals that bear no political or moral responsibility to them (Achebar, et al., 2005; ICIJ, 2003; Kovel, 2002, pp. 73-74). In more than a few cases involving loan conditions, the positions of transnationals have been advanced through political corruption, subterfuge, and conflicts of interest. IMF and World Bank officials have been known to have ties to industries and companies that directly benefit from privatization schemes they recommend (ICIJ, 2003). In some cases, domestic elites also participate in buying up large assets at bargain prices (ICIJ, 2003; Stiglitz, 2002, p. 58).

These privatization strategies do not stimulate domestic capital development but transfer resources and enterprises to foreign investors at bargain basement prices (Ludwig, Blum, & Opitz, 2006), and profits earned by foreign investors in the Global South are mostly repatriated to the First World. Since government debts are paid through taxation, the repatriation of profits from privatized assets purchased by foreign interests contributes to continued government indebtedness (Rowbotham, 2000, p. 125). Nations that are forced to privatize public assets forfeit long-term potential for domestic economic benefits from enterprises sold under these conditions (Rowbotham, 2000, p. 63), thereby increasing their dependency on external loans and capital investment. Privatization most often functions to strip a country of assets rather than serving as a basis for economic expansion (ICIJ, 2003; Ludwig, et al., 2006; Stiglitz, 2002, p. 58) and may negatively impact the economy by encouraging unemployment (Stiglitz, 2002, p. 57).

In recent decades, the IMF has urged immediate privatization rather than waiting for proper regulation or competition to be in place. This urgency to privatize has created entrenched monopolies that need not heed the public interest (ICIJ, 2003; Ludwig, et al., 2006; Stiglitz, 2002, p. 56). According to Stiglitz, “Whether the privatized monopolies were more efficient in production than government, they were often more efficient in exploiting their monopoly position; consumers suffered as a result” (Stiglitz, 2002, p. 56). This urgency for privatization driven by the IMF and World Bank reveals the primarily focus of these institutions on serving the interests of core entities within the world-system.

Capital Market Liberalization

Capital market liberalization opens a country’s banking and currency systems to outside interests. According to Stiglitz (2002), liberalization of capital markets can be intensely destabilizing to a nation's economy, can negatively impact investment and growth, and can ironically involve a nation in purchasing U.S. debt:

> As bad … as trade liberalization was for developing countries … capital market liberalization was even worse. Capital market liberalization entails stripping away the regulations intended to control the flow of hot money in and out of the country – short-term loans and contracts that are usually no more than bets on exchange rate movements. This speculative money cannot be used to build factories or create jobs – companies don't make long-term investments using money that can be pulled out on a moment's notice – and indeed, the risk that such hot money brings with it makes long-term investments in a developing country even less attractive. The adverse effects on growth are even greater. To manage the risks associated with these volatile capital flows, countries are routinely advised to set aside in their reserves an amount equal to their short-term foreign-denominated loans…. Typically, reserves are held in U.S. Treasury bills, which today pay around 4 percent. In effect, the country is simultaneously borrowing from the United States at 18 percent and lending to the United States at 4 percent. (Stiglitz, 2002, p. 66)

Under conditions of financial market liberalization, global banks can attract depositors away from domestic banks while simultaneously encouraging loans to transnationals over those to local businesses (Stiglitz, 2002, p. 31). This process results in the export of capital and in jobs created outside rather than inside the country. Profits earned by transnational banks are largely repatriated to core nations and regions rather than reinvested in the host nation. In Ethiopia, this process meant that farmers were denied credit to purchase seeds and fertilizer. Domestic small farmers, unable to access agricultural inputs, were driven out of business, furthering their and the country's dependence on global agribusiness (Stiglitz, 2002, p. 31). The case of Argentina also demonstrates the dangers of capital market liberalization that competitively eliminates local banks:

> Before the collapse in 2001, the domestic banking industry had become dominated by foreign-owned banks, and while the banks easily provide funds to transnationals, and even large domestic firms, small and medium-size firms complained of lack of access to capital…. The challenge is not just to create sound banks but to also create sound banks that provide credit for growth (Stiglitz, 2002, p. 69).

The Community Reinvestment Act of 1977 in the U.S. was passed precisely to counteract the tendency for banks to lend only to privileged classes and big businesses rather than to diverse people and businesses in their local communities, including historically underserved groups (Shuman, 2000, chap. 4; Stiglitz, 2002, p. 70). Widespread access to capital provided to diverse groups, communities, and neighborhoods can stimulate economic development, but making what banks may perceive as riskier loans does not necessarily serve the interests of the financial sector, at least in the short term. The IMF and World Bank practice of forcing capital market liberalization on debtor nations supports the interests of the global financial sector at the expense of communities and nations.

Foreign Direct Investment

Foreign direct investment is the process of businesses building production facilities in foreign nations. It is associated with some developing country economic growth in cases such as Singapore and Malaysia (Stiglitz, 2002, p. 67). It is also associated with Ireland's Celtic Tiger economy (Kitchen & Bartley, 2007, chap. 1 & 22). However, foreign direct investment may also destroy local competition as transnational firms that enjoy advantages of size and efficiency drive out local businesses and are left free to raise prices by virtue of their new monopoly status (Stiglitz, 2002, p. 68). Economic growth fueled by foreign direct investment can also make the domestic currency appreciate, thereby making imports cheap and exports expensive. Currency appreciation can, therefore, negatively affect exports and make external debts more difficult to pay. Meanwhile, relatively cheap imports can undermine domestically owned businesses that sell to domestic markets, a process which enforces dependency on outside producers and reduces the resiliency of the domestic economy (Stiglitz, 2002, p. 72).

Nations are often encouraged by the IMF and the World Bank to seek foreign direct investment as a means to develop. In their efforts to attract foreign investment, debtor nations usually succumb to pressure to roll back, refuse to enact, or refuse to implement environmental protections (Moyers, 2002; Rowbotham, 2000, p. 65). Environmental as well as worker protections are often treated as barriers to trade by the WTO, the IMF and the World Bank. Furthermore, foreign investors repatriate a large proportion of their profits. Therefore, these investments pay off first and foremost to foreign interests rather than serving primarily as a source for increased and diverse local investment. Furthermore, countries attempting to attract foreign investors typically reduce corporate taxes, thereby constraining the ability of government to serve domestic needs for social support, infrastructure repair and development, and environmental protection and restoration.

Foreign direct investment may stimulate economic growth, but this process is likely to be temporary. When opportunities arise to realize improved cost-of-production advantages elsewhere, foreign investors may pull up stakes and relocate, leaving the economy in perhaps worse condition than it was prior to experiencing external injections of capital (Achebar, et al., 2005; Black, 2001; Shuman, 2000). Through creating an atmosphere conducive to foreign direct investment, nations are likely to reduce their resiliency to economic shock and their potential for self-reliance since, in order to attract such investments, they typically damage their domestic productive base and under-invest in social development and environmental protection and restoration. Virtually all people who succumb to economic pressure to over-exploit their homelands and their people for profits, in a perverse twist, become increasingly dependent upon the very economic system that drives them to engage in socio-ecologically damaging economic activity.

Loan Conditions and Enforced Dependency

IMF and World Bank loan conditions enforce dependency of the periphery on the core within the world-system, but they also create or stimulate market forces that enforce the dependency of the middle and working classes and the poor in all nations upon those who continue to capture and concentrate wealth and power globally. We now turn our attention to the

the oil price shocks of the 1970s in order to examine how the economic shocks that resulted greatly exacerbated the dependency of peripheral nations.

1970s Oil Shocks and Global South Debt Crisis

The Arab embargo of oil exports to the United States in 1973 resulted from the U.S. support of Israel in the 1973 Arab-Israeli Yom Kippur or Ramadan War (Heinberg, 2005, p. 212). This embargo triggered a fourfold increase in global oil prices (see Manley, 1987, pp. 62-64). A second oil price shock in 1979 resulted from the Iranian Revolution which badly damaged that nation's oil sector. Global South nations that were pursuing oil dependent development models to modernize and industrialize faced new and unexpected costs for a commodity that had become essential to their economies and to producing and distributing essential products and services (Manley, 1987, chap. 3). Hunger and poverty increased sharply in the Global South, and some regions even experienced an absolute decline in food grain consumption between 1976 and 1979 (Manley, 1987, p. 66). Globally, an economic recession was triggered, in part by high oil prices. The balance of trade for low-income countries turned sharply negative, and the debt burden for developing countries increased from $67 billion in 1970 to $438 billion by 1980. Making a living in practically any business became much more difficult. It also became more difficult for Global South nations to earn foreign exchange (Manley, 1987, chap. 3).

During this period, many countries capable of exporting large amounts of oil accumulated immense surpluses of dollars because OPEC oil sales were (and continue to be) transacted solely in U.S. dollars. Low absorption capacity for these funds in the domestic economies of OPEC countries encouraged investments of these dollars in the U.S. A sizable proportion of this flood of dollars generated by high oil prices was lent by First World banking interests to developing countries in desperate need of dollars to finance oil purchases and other imports. This process of lending excess petrodollars, known as petrodollar recycling (Clark, 2005, pp. 21-23), greatly exacerbated the debt situation of developing nations.

The value of the dollar also declined in the 1970s, in part due to the negative balance of trade maintained by the U.S. during the Vietnam War, and the U.S. economy experienced stagflation. Prices of goods rose in dollar terms at the same time that domestic economic stagnation reduced employment and aggregate purchasing power. Interest rates were increased sharply in the U.S. in 1979 in an effort to prop up the value of the dollar (Clark, 2005, p. 22), and debtor nations saw interest rates on their dollar denominated, adjustable rate loans rise as a result (Manley, 1987, p. 70). This rise in interest rates, combined with deteriorating conditions for earning foreign exchange through exporting to the U.S., caused nations to default on their external debts.

This debt crisis in the Global South in the 1970s and 1980s resulted from the interrelated complex of dependency enforcing systems of power discussed above combined with historically specific circumstances deriving from fossil-fuel-dependent development. The oil shocks of the 1970s occurred for historically specific reasons but served to entrench global systems of power and exploitation as loan defaults paved the way for SAPs.

Summary and Conclusions on the Role of the Bretton Woods Institutions in Enforcing the Dependency of Global South Nations

Global growth economics and trade liberalization of the past fifty plus years have resulted in further impoverishment and negative social and environmental impacts in many nations (Dasgupta, 2001; Stiglitz, 2002). Since the Global South debt crisis of the 1970s and 1980s, new loans by the IMF and the World Bank have sometimes been made solely to allow a debtor nation to consolidate old loans with a new one (Rowbotham, 2000, p. 65). As anyone knows who has used one credit card to pay another credit card bill, the cycle of deepening debt imprisons the debtor, making him/her vulnerable to the demands of creditors. Many peripheral countries have found their entire export earnings insufficient to repay the interest alone owed on their external debt (Rowbotham, 2000, p. 51).

International finance has played a powerful role in enforcing the dependency of the periphery while privileging the core areas and transnational interests within the world-system. According to Rowbotham, "Debt … represents a powerful political instrument for subjecting debtor countries to international economic control and making them specialise at the level of production" (2000, p. 67), a process that reinforces their colony-like status and function within the world-system. To make matters worse, according to Kaplinsky (2005), the terms of trade have steadily deteriorated for the Global South as the prices of their exports have fallen relative to industrial nation exports of agricultural and manufactured goods and knowledge-intensive services (Kaplinsky, 2005, p. 187).

Within the world-system, IMF and World Bank loan conditions and SAPs have systematically served the interests of foreign creditors and investors at the expense of the people, the environments, and the economies of debtor nations. Stiglitz cites a particular example of IMF programs functioning to bail out Western creditors. According to Stiglitz (2002), when foreign creditors anticipate an IMF loan agreement with a given nation, they have weakened incentives to make sure their debtors will be able to repay -- a problem known as moral hazard (pp. 201, & 207-208). In these and other dependency enforcing situations, IMF loans create profit opportunities for creditors rather than helping the domestic economy thrive. In the end, dependency enforcing debt has served to undermine the long-term stability of entire societies and economies (Stiglitz, 2002, p. 209). This lack of stability characterizes the world-system and undermines its resiliency and sustainability.

The multiple reciprocally reinforcing aspects of enforced dependency built into the system of global finance create a global rentier economy of "resource grabs and debt dependency" (Hudson, 2005, p. xxvii). Rowbotham sums up this situation: "Debtor nations remit a perpetual tribute to the wealthy nations and their corporate interests, and are kept in a state of permanent monetary bondage as interest payments, profit repatriation and dividend payments siphon money from their economies" (2000, p. 123).

We now turn our attention away from the dependency enforcing systems of peripheral nation debt to explore how U.S. dollar hegemony and U.S. debt enforce dependency within the world-system.

Dollar Hegemony, the U.S. Debt and International Economic Co-dependency

As noted above, with the Bretton Woods agreement in 1944, the U.S. dollar became the de facto world currency. The value of the dollar was pegged to gold, and the values for all other currencies were pegged to the dollar. The gold exchange standard ended in 1971 when the Nixon administration unilaterally refused to allow further exchanges of dollars for U.S. gold reserves and floated the U.S. dollar on the world currency market. Even without the backing of gold, the U.S. dollar has managed to remain the premier world currency. We will now examine how and why the hegemonic status of the dollar is maintained in the world-system. We will also examine the global effects of dollar hegemony.

As discussed above, the fact that many international loans are denominated in dollars provides the U.S. with political and economic leverage, but dollar hegemony creates additional advantages for the United States at the expense of the rest of the world. During the 1970s, worldwide speculative movement out of U.S. dollars occurred, in part, as a result of continued balance-of-payments deficits run by the United States (Hudson, 2005, pp. 94-95). As noted above, the Federal Reserve reacted by raising interest rates, thereby constricting the money supply and propping up the value of the dollar. Since the early 1980s, the value of the dollar and its status as a world reserve currency (meaning that U.S. dollars and dollar-denominated securities are held by non-U.S. central banks as well as by businesses and individuals around the world) has allowed the U.S. to accumulate huge balance-of-payments deficits. For the U.S., the total economic gain from supplying a world reserve currency (also known as seignorage) is equal to its cumulative balance-of-payments deficit on its import-export account. This deficit represents unpaid-for goods and services supplied to the U.S. by the rest of the world. This negative balance of trade has allowed the U.S. to maintain a relatively high standard of living for its citizens even as its manufacturing sector has been outsourced abroad. In 2004, the total accumulated amount of this deficit was around $3 trillion, and it was accumulating at around $1.3 billion per day (FEASTA, 2004, p. 5). The U.S. has been creating money from nothing and has been using it to purchase half again more imports than it exports. According to the Foundation for the Economics of Sustainability or FEASTA,

> We can get a good idea of how big the $3,000bn subsidy has been by recalling that in 1998, the United Nations Development Programme estimated that the expenditure of only $40bn a year for ten years would enable everyone in the world to be given access to an adequate diet, safe water, basic health care, adequate sanitation and pre- and post-natal attention. (2004, p. 6)

These enormous gains reaped by the U.S. from seignorage account for the economic and military power of the United States. The U.S. has been able to develop its unparalleled military might because other nations finance its growing debt that enables heavy military spending (FEASTA, 2004, p. 5).

Although a large proportion of the $3 plus trillion deficit of the U.S. is held by creditors in the form of Treasury bills and bonds on which interest is being paid, payment of interest is actually financed through creation of further debt. The U.S. is able to import vast amounts of goods and services while simultaneously amassing a huge debt simply because of its position as the creator of U.S. dollars (FEASTA, 2004, p. 5). Of course, this arrangement depends upon continuing international faith in a growing U.S. economy. It also depends upon the unwillingness of creditors to pull their investments out of the U.S. economy due to the likelihood that doing so would threaten their own economic stability.

Michael Hudson describes thusly the process through which the U.S. effectively gets others to both pay its debt and maintain their investments in the U.S. economy:

> The United States … [draws] on world resources through a novel monetary process: by running balance-of-payments deficits that it refuses to settle in gold, it has obliged foreign governments to invest their surplus dollar holdings in Treasury bills, that is, to relend their dollar inflows to the U.S. Treasury. (2005, p. 17)

This process is further supported by the fact that, in domestic markets worldwide, dollars are redeemed for domestic currencies at central banks, and central banks purchase Treasury bills with these dollars. Investing in Treasury bills -- though they may provide lower rates of return than investing in the private sector -- has so far been deemed a comparatively safe investment by foreign central banks (2005, p. 30).

Through the aggressive use of seignorage, by 1971, "the United States [had] succeeded in establishing its own government debt as the key international monetary standard" (Hudson, 2005, p. 25). According to Hudson (2005), post-1971,

> expansionary monetary and fiscal policies were pursued irrespective of their balance-of-payments consequences. In the face of a growing payments deficit the U.S. Government accelerated federal spending and money creation, and watched foreigners bear the cost of financing this spending spree. (p. 25)

Hudson (2005) further explains the economic costs of these U.S. policies to foreign countries:

> Foreign countries that run balance-of-payments surpluses presently are obliged to keep their central bank reserves in the form of loans to the U.S. Treasury ad infinitum. These savings become part of the U.S. financial system rather than building up their own productive capacity. There is no hard-currency guarantee for the value of these loans as the dollar falls against the euro, yen and other currencies of economies running trade and payments surpluses. In domestic-currency terms, the values of dollars held in central bank reserves declines. (p. xxviii)

Hudson (2005) continues: "In the past, nations had sought to run payments surpluses in order to build up their gold reserves. But now all they [are] building up [is] a line of credit to the U.S. Government to finance its programs at home and abroad" (p. 30). U.S. military spending and spending on foreign imports, in effect, translate into savings in foreign countries through their purchase of U.S. Treasury bills and bonds. Through this purchase of the U.S. debt and through other avenues in the global economy, many dollars spent overseas make their way back into the U.S. economy (Hudson, 2005, p. 32; Rowbotham, 2000, p. 125). These processes of simultaneously generating savings in foreign countries and purchases and investments in the U.S.

economy increase the purchasing power and economic vitality of the U.S. while, at the same time, applying the brakes to other nations' economies as the savings stimulated effectively remove from domestic circulation the money earned from exports sold to the U.S.

During the oil price shocks of the 1970s, the U.S. succeeded in convincing OPEC members to hold much of their excess dollar earnings in U.S. Treasury bills. Therefore, the oil price rises were less problematic than they might have been for the U.S. due to the recycling of U.S. dollars spent on OPEC oil back into the domestic economy (Hudson, 2005, pp. 108-110). In recent years, the U.S. Treasury bill standard has faced competition from investment opportunities denominated in other strong currencies, particularly the Euro. If the U.S. is to continue to convince OPEC to help finance its deficits, it must thwart the emergence of competing currencies and investment opportunities (Clark, 2005, chap. 1 & 5; Hudson, 2005, p. 258). In particular, the U.S. must succeed in maintaining the petrodollar system according to which the dollar is the sole currency used for OPEC oil purchases (Clark, 2005, chap. 1 & 5).

With the near complete demise of the U.S. manufacturing sector along with global reliance on the U.S. as the consumer of last resort, the *status quo* functioning of the global economy depends upon the U.S. government and consumers taking on increasing amounts of debt. The U.S. has actively promoted this form of international co-dependency which has allowed it to become the world's sole superpower – but this situation cannot continue forever. American deficits may become so large that they scare off creditors, and the rest of the world may tire of the U.S. dominating the global economy while undermining the ability of other nations to complete. The recent U.S. unilateralism in international relations and war may further reduce the world's tolerance for U.S. economic and political dominance (Clark, 2005, chap. 7). Still, for many countries, there are risks to dumping dollar-denominated investments on the world market and abandoning the petrodollar system – both of which would drastically reduce the value of the dollar -- though for some nations and regions, the risks may eventually be outweighed by the growing instability of the current monetary and economic system. According to Rowbotham (2000), "The aggregate of national debts coupled with the private/commercial debt directly associated with the money supply places … [wealthy] nations in a position of permanent financial exposure" (p. 97), and those exposed include creditors of the U.S.

The hegemony of the U.S. dollar, however, is perhaps beginning to crack under pressure from various directions. One point of pressure is the rise of competing currencies. Prior to the global economic downturn that began in 2008, the Euro was rising in value compared to the dollar. Another source of pressure has been stable and profitable investment opportunities offered by rising and integrating economies outside the U.S., particularly in Asia and Europe. At the time of this writing, the Eurozone as a whole has been destabilized by overly-indebted member nations and the negative economic effects of the global recession. As a result, the value of the dollar has risen again relative to the Euro. It will take some time to see how the relative strengths of the two currencies play out within the global economy, but the recent rise of the Euro demonstrates the possibility of other currencies to eventually compete with the dollar on the world stage.

Another threat to U.S. dollar hegemony is represented by the power of OPEC, power that will only increase as the realities of peak oil enforce the dependency of economies worldwide on

OPEC oil supplies, which are by far the largest in the world. Using their unique endowments of oil, OPEC nations could choose to extend credit to foreign purchasers conditional upon these countries allowing them to purchase their domestic assets, a condition that would extend their political influence. Such a move would weaken the political and economic power of the U.S., thereby weakening its ability to entice other nations to accept the Treasury bill and petrodollar standards (Hudson, 2005, p. 267).

We now turn our attention to the hegemony of global capitalist elites and culture in an effort to understand how this form of hegemony enforces dependency within the world-system.

Hegemony of Global Capitalist Elites and Culture

Late capitalist culture and economy inform and reinforce each other reciprocally. Global capitalist elites maintain hegemony through wielding their power and wealth in ways that promote continued concentration of power and wealth in their own hands, thereby, furthering their ability to reproduce and reinforce hegemonic economic and political relationships.

The concepts of private property and the enforcement of private property rights are central components of capitalist cultural hegemony (Achebar, et al., 2005; Polanyi 1944/1957; Proudhon, 1902/1966). Commodification, privatization of public assets and enterprises, the extension of the concept of private property into ever more areas of life, and the enforcement of intellectual property rights all represent modern versions of enclosure of the commons. Capitalism has been able to continue its global expansion of production and consumption, in part, due to private takeover of resources and services that were once considered public commons. Increasing privatization and commodification of essential resources such as land, water, seeds, and other genetic material essential to food production increase dependency of the world's communities upon globalized capital even as they increasingly concentrate wealth and power within the world-system (Barlow & Clarke, 2002; Garcia, 2004; ICIJ, 2003; Ludwig, et al., 2006; Shiva, 2000). That this dependency extends into areas essential to life further promotes the socio-ecological control and the entrenchment of capital.

The global concentration of wealth and power in the hands of transnationals and corporate and banking elites furthers the ability of capital to advance its economic and cultural agenda. We examined above many policies and practices that serve to concentrate wealth and power in progressively fewer hands. Growing income gaps between the rich and poor provide evidence that this concentration is occurring, and these gaps have never been greater than at this point in time (Homer-Dixon, 2006, p. 186). During the last decade of the 20th century, despite promises that globalization would reduce poverty if developing countries would stay the neoliberal course (Stiglitz, 2002, p. 213), the numbers of those in dire poverty grew by almost 100 million people at the same time that world income increased by an average of 2.5 percent annually (Stiglitz, 2002, p. 5). Development proponents often point to relative rates of economic growth as an indication of economic convergence, saying that those developing countries experiencing high growth rates will catch up with the industrial world in terms of living standards. Homer-Dixon (2006) explains why citing these figures as evidence of near term convergence is a fallacy:

> Now this may look like a convergence because incomes in poor countries are predicted to grow faster than those in rich countries. But it's not. The gap between poor and rich average incomes will continue to widen: although the average income of rich countries is growing at a slower rate, this rate multiplies a vastly larger income base -- $32,000 annually per person in 2006, according to the [World] Bank, compared with $1,500 in poor countries. So the absolute size of the gap between the average incomes of rich and poor countries steadily widens. And it widens not just for a few years or even a few decades but for *hundreds* of years to come. (p. 190)

Furthermore, the economic growth imperative deepens these disparities because core producers exploit their advantage in the global economy at the expense of peripheral producers who find it all but impossible to compete (Homer-Dixon, p. 200).

The corporate legal structure also contributes to concentration of wealth and power that promotes capitalist elite hegemony. Unlike people, corporations are immortal. When a person dies, his/her resources are usually distributed among surviving relatives and friends and possibly to chosen charities, foundations, and causes. Since corporations tend to outlive particular CEOs and boards of directors, they can often continue to concentrate wealth and power for long periods of time so that successful transnational corporations possess economic power unknown to previous generations.

The global movement toward finance and speculation as the central vehicle for profit generation also reinforces the concentration of power and wealth because it takes money to make money through investment and speculation in the global economy, and the more money one has available, the larger the potential for profit. Although the possibility for extensive financial loss also exists, one cannot even enter this playing field without significant capital backing. This new focus in the global economy, therefore, advances the hegemony of capitalist elites.

The continual focus on lowering inflation in the U.S. and Britain reveals how the interests of the wealthy and powerful also influence fiscal and monetary policy. Since inflation tends to benefit debtors over creditors, it is to be avoided. According to Stiglitz (2002), "For the financier who has lent his money out long term, the real danger is inflation. Inflation may mean that the dollars he gets repaid will be worth less than the dollars he lent" (p. 217). While there is agreement that no economy can succeed under hyperinflation, "there is little evidence that pushing inflation to lower and lower levels yields widespread economic gains commensurate with the costs, and some economists even think that there are negative benefits from pushing inflation too low" (Stiglitz, 2002, p. 220). In the global context, the IMF insists that "countries have an independent central bank focusing on [reducing] inflation" (Stiglitz, 2002, p. 45). This policy embodies a clear creditor bias. If the IMF were more concerned with diverse and widespread economic development, it might focus at least as intently on employment and growth, which we have seen it does not (Stiglitz, 2002, p. 45). We see that the fiscal and monetary policies within globally hegemonic economies and within international banks that serve the interests of hegemonic capital serve to advance the interests of capitalist elites within the world-system, thereby helping these elites to perpetuate global economic culture in their own image.

Culturally, corporate and government officials involved in international trade and finance tend to view the world through the eyes of large corporate entities since these are the heavyweights in global political economy:

> Multinational corporations … have been accused of a catalogue of crimes; blackmailing national governments to grant them subsidies; exerting pressure to change government economic policy; asset-stripping; exploitation of the developing world; transfer pricing to avoid taxation; acquiring by patent law rights that ought not to belong to any single private interest – the list is endless. The fact that these issues have not been addressed, indeed are not even on the agenda, lends support to the concern that the tier of international governance is pro-corporate. (Rowbotham, 2000, p. 4)

Furthermore, corporate elites and international power brokers often conflate freedom with capitalism – free markets with free people. To the proponents of the global economy, globalization is synonymous with progress, and developing countries must accept neoliberal globalization as the route to becoming an American-style capitalist society (Stiglitz, 2002, p. 5).

It is also important to consider both what is on and what is off the neoliberal agenda. Since entertaining challenges to globalization from client countries would open the door to questioning neoliberal orthodoxy, core entities stifle discussion of alternate economic strategies and policies, and leaders within the dependent periphery generally avoid openly questioning neoliberal imperatives (see Stiglitz, 2002, p. 43). There may be money to bail out banks but not to pay for improved education and social services, nor to assist those who become unemployed as a direct result of neoliberal policies (see Stiglitz, 2002, pp. 43 & 81). Considering the neoliberal agenda in this way reveals its hegemonic foundations.

In the case of the neoliberal policies of the IMF and the World Bank, we have seen that these institutions do not represent the broadly based interests of developing countries. Furthermore, by tradition, the head of the IMF has always been a European, and the president of the World Bank has always been an American. These leaders are chosen behind closed doors, and they often have little experience in the Global South (Stiglitz, 2002, p. 19). Stiglitz (2002) asserts that the IMF and the World Bank are "driven by the collective will of the G7" (p. 14) so that these institutions advance elite capitalist hegemony.

There is also a problem with those who speak for given Global South countries. At the IMF, finance ministers and central bank governors govern the institution; at the WTO, trade ministers represent their countries. Representatives sent to each of these institutions tend to represent a select constituency within each country they represent: trade ministers representing the interests of the business community and finance ministers and central bank governors representing the financial community. The interests of a small minority -- and a minority whose interests closely approximate those of the business and financial communities in the developed world -- are advanced over the interests of the vast majority of the population of many countries. This situation is profoundly undemocratic. Concerns for the environment and social justice are virtually ignored (Stiglitz, 2002, pp. 19-20) while the interests of national elites and global capital are advanced.

Homer-Dixon summarizes thusly important cultural and economic processes that reinforce the hegemony of global capitalists:

> There are the social causes of denial [of the social and environmental problems created by globalization]. Probably the most important is the self-interest of powerful groups – corporations, government, agencies, lobbyists, religious institutions, unions, non-governmental organizations, and the like – that have a vested interest in a particular way of doing things or viewing the world. If outside evidence doesn't fit their worldview, these groups can cajole, co-opt, or coerce other people to deny this evidence. Some groups … will be much more effective in the effort than others, owing to their enormous political and economic power …. Our economic elites don't just encourage consumerism. Through their influence on the media and on our society's political process, they create, reproduce, and justify a pervasive and interlocking system of rules and institutions – from property rights and capital markets to contract and labor laws – that promotes growth and that, in the process, buttresses their power and privilege. A particular language of capitalism – a 'discourse' of economic rationality and competition that penetrates into every nook and cranny of our economies, societies, and lives – helps us understand and abide by these rules and institutions. This language says that people maximize their pleasure from consumption and that they make decisions as if they were calculating machines, constantly weighing costs and benefits to evaluate their choices. Capitalism's language also says that our labor is a commodity to be bought and sold in the competitive marketplace. And it equates our personal identities with our economic roles in that marketplace…. For the vast majority of us who sell our labor in the marketplace, our economic insecurity and relative powerlessness impel us to play by the rules. And in capitalist democracy, playing by the rules means not starting fights over big issues like our society's highly skewed distribution of wealth and power. Instead, it means focusing on achieving short-term material gains – such as bettering our contracts with our employers. Put simply, our economic elites have learned, largely through their struggles with workers in the first half of the twentieth century, to protect their status by creating a system of incentives, and a dynamic of economic growth, that diverts political conflict into manageable, largely nonpolitical channels. And long as the system delivers the goods – defined by capitalist democracy itself as a rising material standard of living and enough new jobs to absorb displaced labor – no one is really motivated to challenge its foundation. (2006, pp. 215-217)

Marcuse (1964) calls this complex of processes (that reinforce the hegemony of dominant groups through the creation of a system that is perceived to be serving the interests of people at all levels of society) "repressive desublimation." Antonio Gramsci (1971) labels such processes "passive revolution" that serves to contain the contradictions of the capitalist system. Like Marcuse and Gramsci, Homer-Dixon (2006) argues that challenges to capitalist processes of enforced dependency are unlikely to come from the upper echelons of society saying that "members of our economic elite rarely have qualms about the prevailing economic worldview because it sustains their status, and because they generally believe that they've achieved that status through their superior intelligence, guts, and drive" (p. 218).

At the same time, the cultural hegemony of the late capitalist word-system inhibits challenges from below, not only through enforced dependency, but through hegemonically pervasive capitalist culture. According to Homer-Dixon (2006),

> The tacit arrangement among our elites, our experts, and the rest of us is essentially symbiotic – a mutually gratifying and self-sustaining cycle of denial and delusion. Through our acquiescence in and often active support of modern capitalism, we legitimize our elites' and experts' status and power, while those elites and experts give us an overarching ideology of permanence, order, and purpose that lends our lives a sense of place and meaning. According to this ideology, economic growth is a panacea for all our social and personal problems. Growth equals health. Unfortunately … when we're in denial, we can't think about the various paths that we might take into the future. Nor can we prepare to choose the best path when the opportunity arises. Radically different futures become literally inconceivable – they are 'beyond imagining' … in the same way the heliocentric cosmos was inconceivable to many people prior to the Copernican revolution. (p. 219)

Stiglitz (2002) describes the situation thusly:

> We have a system that might be called *global governance without global government*, in which a few institutions – the World Bank, the IMF, the WTO – and a few players – the finance, commerce, and trade ministries, closely linked to certain financial and commercial interests – dominate the scene, but in which many of those affected by their decisions are left almost voiceless. (pp. 21-22)

Through examining the closely reciprocal relationship between cultural and economic hegemony, we see that profound changes in the material circumstances of life create profound changes in consciousness and vice versa in a cycle that continually deepens enforced dependency within the late capitalist world-system. These cultural and economic processes that characterize late capitalism explain what might at first glance appear to be the surprising degree of global acceptance of hegemonic ideas and actions among both global elites and the global oppressed. Of course, there are counter hegemonic groups, such as the Zapatistas in Chiapas, Mexico (Marcos, 2001), and indigenous groups fighting to maintain their traditional economies and cultural/spiritual ties to place (Grossman, 2005; LaDuke, 1999). These groups raise important challenges to globalization, but globalization as an economy and a way of life continues to spread -- new markets are opened and the money economy colonizes the few remaining locally based and subsistence economies left in the world (Berry, 1987; ISEC, 1993; Martinez, 1997; Shuman, 1998).

Now that generations all over the world have grown up and are growing up in a thoroughly globalized world, the lines of cause and effect that informed the development of our economic, cultural, and ecological world of late capitalism are further obscured by lack of social memory. Young adults and youths have no direct experience with a world before globalization. The world as it is now is taken as a given by many young people, and given Western culture's ingrained notion of progress, the world that is now is assumed by many to be the best of all possible worlds. Young people have been acculturated into the values system of modernity (Spretnak,1997) and its outgrowth, the globalized world.

Globalized Society as a World-System of Enforced Dependency Lacking in Resiliency

Historically, once subsistence cultures of place were broken down and colonies were folded into the capitalist system, the dependency of colonized regions was enforced through brute force and later through the creation and enforcement of economic rules and practices. Within the world-system, dependency that was originally enforced by nation states has continued in the late capitalist era in spite of the erosion of nation states' influence by the forces of globalization. Once an individual, a community, or a nation has become dependent upon the capitalist system, there is virtually no escape. Furthermore, the world-system relies upon this dependency in order to feed the engines of economic growth and to maintain the global political and economic dominance of the capitalist elite. As we have seen, the system is virtually impossible to escape for debtor nations faced with the choice to comply or collapse economically, but it is also difficult to escape for individuals who lack access to the productive capacities of the land and/or who lack the knowledge and experience necessary to make use of these capacities. We have focused attention on macro level analysis here, but dependency is enforced even at the very personal level of individuals and families. The urban poor are typically entrapped in the day-to-day struggle for existence, and wealthy and middle-class individuals, too, are often heavily indebted to banks. Escape from extreme dependency is possible, but it is very challenging – and, at least initially, it typically comes at a high cost in terms of personal security and social inclusion, a cost some simply cannot afford to bear. Furthermore, many of those who are systematically disadvantaged within the world-system suffer from poverty, poor health, and lack of education, and each of these problems typically compounds and reinforces the effects of all the others in a process that creates powerlessness (Stiglitz, 2002, p. 83).

The complex global systems of enforced dependency are highly unstable and vulnerable to near-term collapse. Continuing inequities within the global economy promote conflict, both within nations and internationally as late capitalist cultural hegemony loses its grip on containing social and economic contradictions. At the same time, socio-ecological resiliency is continually sacrificed to fuel the engines of global economic growth. As global society realizes diminishing returns on increasing social and economic complexity, the world-system becomes increasingly vulnerable to collapse (see Tainter, 1988). Furthermore, the likelihood that collapse will be catastrophic increases as globalization encourages tight linkages among components and processes of the world-system, making the boom and bust phases of the business cycle increasingly likely to trigger global-scale economic breakdown (see Homer-Dixon, 2006, chap. 9). Environmental damage and stress, and loss of diversity in human and ecological systems compounds these problems, further increasing the potential for global social, economic, and ecological disaster. The monocultures promoted within the world-system in agriculture, popular culture, materialism, and employment are inherently unstable due to their lack of diversity and their heavy reliance upon petroleum-dependent transportation of goods. Simultaneously, global free market competition in the world-system reduces resiliency because globalization channels power and wealth into the hands of a few while disenfranchising many small-scale, local producers and decreasing diversity in economies, ecosystems, and communities. These tensions serve as sources of ever-present and ever-increasing economic and social instability.

Though development bank and corporate officials may see themselves as helping the poor by investing in the Global South, in reality, the institutions and processes of enforced dependency, both global and national, have been created by the powerful in order primarily to serve their own interests, and this service has come at the expense of the oppressed. These institutions and processes actively resist a redistribution of wealth and power that would materially benefit the victims of privilege. Such redistribution would require hegemonic groups to adopt a virtually opposite set of priorities and interests to the ones they have actively advocated for many years, perhaps for entire professional lifetimes. Even if global capital were to genuinely promote economic growth in Global South, economic growth itself is neither a desirable nor sustainable end in socio-ecological terms.

We appear to be reaching the physical -- if not also the moral -- limits of globalization. And so, we must ask ourselves, if the dreams of the late capitalist paradigm are counterfactual to aspirations for a socio-ecologically sustainable society, what kind of dreams should we aim to realize? If we begin with the goal of eliminating systems of enforced dependency in an effort to create or restore diverse and resilient societies, I believe we are on the right track. We must begin this work at home, in our communities, in our nations, and in the larger world-system.

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About this Work

This paper is adapted from a chapter of Dr. Evans' dissertation titled *Living and Learning Sustainability: Pedagogy and Praxis in Sustainability Education* (2011). Her full dissertation is available online and through the *Dissertation Abstracts International* database.