

Cátedra UNESCO Philosophy for Peace
Master's in Peace, Conflict and Development



*Reconceptualizing Progress and Building
Sustainability at the Local Level in the United
States*

Master's Thesis

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Introduction

In today's globalized world bigger is perceived to be better, especially in the United States. Most people in the United States dream of a bigger house, frequent restaurants that give a bigger food portion, and work to have a bigger bank account to buy a flashier car, the newest technology gadgets, or take a fancy vacation. Each new thing must be bigger than what came before it because that has become the standard of progress that has been perpetuated by our current growth economy. However, infinite growth is not only becoming harder to achieve on a personal level with stagnant salaries, it has also started to rear its ugly head.

Many people do not put a lot of thought into their bigger and may not always be better purchases. They do not think of the great journey their purchases made before landing on their plates or in their closets, nor do they think of its implications. What people do consider is the price of that product and if the monetary impact is worth it. The irony is that the ones that are most influenced by price are often the most hurt by the effects of a growth economy. In the United States the jobs of factory workers are the ones that have moved overseas so a company can keep chasing growth by searching for cheaper labor. They are the small farmers that produced quality food that can no longer compete with larger, chemical-ridden corporate farms that can produce significantly more food at a lower price. They are also the poor who are forced to work in minimum wage corporate jobs because that is all that is available in their community because quality local companies have shut down, unable to compete in price with their larger counterparts.

When conducting consumer activities not many ask if it is affordable to the planet, if it is exploiting other humans or if it is taking away jobs or livelihoods from their own community, in other words sustainability is not considered. This can no longer happen, not just because of the moral issues surrounding the degradation of the environment and human exploitation, but also for the sustainability of our cities and towns. When a large corporation comes to town and brings four hundred jobs the local government is applauded, but when that same corporation forces the closure of several local businesses and hundreds of quality jobs are lost, no one is held accountable. In the end, low price tags may actually have a very high price for local communities. The idea that an increase of business activity in monetary units is progress has been driven home by our national governments that put an emphasis on continual economic growth, but what if progress was reconceptualized or reimagined to mean something deeper? What if economic growth was not the only way to progress?

The goal of this thesis is to find an alternative model to the current growth system that can begin to work at a local level despite being part of the larger current system. Reconceptualizing progress is at the core of envisioning an alternative model. It is my belief that a reconceptualization of progress leading to a larger focus on sustainability activities could be more beneficial than economic growth at a local level. Furthermore, I believe this would also create a more peaceable society.

There are some people in the world that are realizing the unsustainability of continuous growth and taking action to think outside the box. Some thinkers and activists include: Richard Heinberg with his book “The End of Growth”, Bill McKibben in

“Deep Economy”, Herman Daly and his work in steady-state economics and alternative indicators, Joseph Stiglitz, Amartya Sen and Jean-Paul Fitoussi in “Mismeasuring Our Lives”, Alice Waters in the local food movement, along with countless others involved in sustainability movements (Stiglitz 2010). I feel that it is relevant to explore these movements, as they are integral to redefining progress and finding a way out of the cycle of inequality, marginalization and greed that a goal of economic growth creates. Beyond this, I see relevance in analyzing alternative conceptualizations of progress to be able to evaluate local development projects in a more comprehensive manner than a single bottom line.

Growing up in a part of the country nicknamed the “Rust Belt” I have seen the failure of development in the form of dependence on large corporations, namely the automotive industry, that ends up moving jobs overseas, automating jobs, shutting down factories and devastating towns all in the name of trying to chase continuous growth year after year. Being from this area is what inspired me to look at the current growth economy and search for a different way. However, the goal of this thesis is to explore a more broad alternative approach that could be applied not only in the Rust Belt but also in local communities throughout the country.

Community members in cities and towns around the country have been looking for more sustainable ways of development, while many times the local government is looking to restart the same path by trying to attract large companies to the area. This thesis comprises an analysis of the current measures of progress and an exploration of the alternatives to the present growth economy that are currently at the grassroots level, but

have the potential of expanding if community will and city policy allow it.

Chapter Outlines

The first chapter analyzes the way progress is currently assessed. I look at historical views of progress, shortcomings of a growth economy and the limitations of current indicators of progress such as gross domestic product (GDP). I also use the 4G syndrome of growth, greed, glut and grievance presented by Alberto Gomes to explain the natural inclination of a growth economy (Gomes 2013). This chapter sets the stage for the necessities of alternative conceptualizations of progress.

The first subsection of this chapter explores the historical views of progress. Delving into history is important for three reasons: the first to learn from our mistakes, the second to realize what has already worked in the past but has been forgotten about and lastly to see the evolution of theory and terminology in regards to progress, development and the economy. This section also includes the definitions that I use for the various ideas that are presented here, including: sustainability, peaceability, sustainable development, progress and community. All these definitions provide a framework for understanding how I conceptualize my own research.

The following subsection looks at the shortcomings of a growth economy and the limitations of current indicators. The shortcomings focus on the inequality of a growth economy and the failure of development that occurs in several cities in the United States when economic growth is the primary objective. My analysis draws from the work of

Richard Heinberg and Kirkpatrick Sale as well as other scholars that are focused on no growth or degrowth economies (Heinberg 2011) (Sale 2013) (Czech 2006).

Then, the limitations of GDP, being the currently most used indicator of “progress”, is discussed. My analysis here draws from Joseph Stiglitz, Amartya Sen, and Jean Paul Fitoussi’s research presented in “Mismeasuring Our Lives: Why GDP Doesn’t Add Up” among other works that focus on the shortcomings of GDP (Stiglitz 2010). There is also a look at the Human Development Index (HDI), which is the main alternative to GDP that is currently employed by branches of the United Nations (UN). Examining the limitations and inadequacy of these two indicators provides a basis for the need of an alternative conceptualization of progress (United Nations Development Programme 2013).

The next subsection looks at a growth economy through the 4G syndrome. The 4G Syndrome (earlier defined as Growth, Glut, Greed and Grievance) is an analytical framework used by Alberto Gomes to explain the cycle that is created through a growth-based economy. This allows me to further expose the downside of the current System using Gomes’ theory. In line with Johan Galtung’s definition for structural violence, the 4G syndrome allows me to examine economic growth specifically as one of the root causes for structural violence in the United States (Galtung 1969). Looking at each component of the syndrome and how it leads and is caused by the other components is key in understanding fundamental defects that a community faces when continually chasing growth. I believe that this analysis could also reveal a way out of this cycle that could be examined more deeply in later chapters (Gomes 2012: 1060).

The second chapter explores how to reconceptualize progress by analyzing various alternatives to GDP indicators as well as exploring no growth and degrowth theories. This chapter is the heart of the thesis as I believe that without a reconceptualization of progress we cannot begin to explore alternatives to our current growth system and GDP as an indicator at a local level. Several indicators were created to be applied at a national level, so an examination of the transferability of these indicators to be applied at a local level is considered. The limitations of the various alternative indicators are also discussed within each section and at the end of this subsection.

The first subsection examines several alternative to GDP indicators or alternative accounting methods that are present today. These include: Gross National Happiness (GNH), Genuine Progress Indicator (GPI), Happy Planet Index (HPI), Global Peace Index (GPI) and its more contextual United States Peace Index (USPI), and Triple Bottom Line (TBL). Each section explores the benefits of each indicator and the implications each would have if used at the city level. Case studies of the use of each are highlighted in their respective sections. The limitations of the various alternative indicators are also discussed within each section and in general at the end of this subsection. In my discussion I rely on the works of Herman Daly, Robert Costanza, Maureen Hart, Stephen Posner and John Talberth's "Beyond GDP: The Need For New Measures of Progress", ideas from John Elkington's "Cannibals With Forks, Andrew Savitz's "The Triple Bottom Line" and E.F. Schumacher's "Small is Beautiful" along with other works on alternative models and indicators (Costanza 2012)(Elkington 1997) (Savitz 2006)(Schumacher 1973).

The following subsection is an analysis of no growth economies or degrowth theory, which is not an indicator, but an alternative method for viewing progress. Delving into the works of Nicholas Georgescu Roegen, Serge Latouche and Herman Daly among others allow for a proper exploration of the possibility that the best reconceptualization of progress may not include alternative indicators, but a complete revamping of a local economic system. Though this section explores the possibility of the two being used in conjunction with each other (Georgescu Roegen 1971)(Serge Latouche 2009)(Daly 2008).

The final subsection summarizes my findings of all the alternative indicators and alternative economic models in order to reconceptualize progress for the remainder of the thesis. I believe that a reconceptualization of progress is a mix of various indicators and methods, though I may find that there is a current alternative that is ideal and perhaps may just need to be tweaked to be applied at the local level.

The third chapter is an in-depth focus on various rural sustainability activities happening in the United States today and how these activities are contributing to both peaceability and sustainability. Both rural intentional communities and other rural sustainability activities will be explored. It is my belief that exploring these movements and applying my reconceptualization of progress to them could shine a brighter light on the benefits they have for their communities and beyond.

The first subsection looks at three sustainable, intentional communities and uncovers some of the technologies and methods that they are using as well as how these activities affect peaceability in their communities. The focus is on the Findhorn

Ecovillage in Scotland, Cobb Hill Cohousing in the state of Vermont in the United States, and Lost Valley Education Center in the state of Oregon in the United States. I believe that exploring these various communities reveals not only transferrable sustainability ideas, but also peacebuilding techniques that could be implemented in a depressed urban area. I uncover their peaceability through designing a 4G Solution that would create a cycle of positive peace to counter the 4G Syndrome that creates a cycle of structural violence. I am concentrating my research to intentional communities and activities that I feel would have the most transferability to an urban community.

This first subsection includes literature reviews from the Findhorn Eco-village in Scotland and Cobb Hill Cohousing in Vermont as well as experiential research from a month-long program at the Lost Village in Oregon. The research from the first two ecovillages provides me with background information about intentional communities that have been a long-standing success, serve as a display of the variety of how intentional communities are set up as well as serve as a preparation for my experiential research at the Lost Village. I conduct a critical assessment of each intentional community.

The following subsection surveys specific sustainability activities that many ecovillages utilize, but I feel deserve a more in-depth analysis because of their potential for transferability to urban settings. This includes permaculture, sustainable building techniques and animal husbandry. Also, each activity is analyzed in how it can help feed the 4G Solution as well as how policy change has helped or hurt each of these activities.

The final subsection in this chapter summarizes my findings and what I feel are the most useful techniques or movements that should be expanded for further progress.

Furthermore, it clearly displays the most transferrable ideas that could be further utilized in urban settings. Lastly, this section includes insight that could prove useful in the creation of a new intentional community with strong 4G Solution components.

The fourth chapter focuses on urban sustainability activities within the United States. Many cities, people and organizations have taken great strides in improving sustainability and have perhaps used similar ideas from intentional communities in their city planning and policy. An examination of their impact in these communities is assessed with my reconceptualization of progress with special attention given to the peacebuilding aspects of these activities.

The first subsection focuses on movements that are happening by people within urban settings, many times outside of policy change. Movements that are highlighted include: localization of food production, urban farming, and placemaking activities. Each of these movements is described more in-depth and how and why policy should be changed to help these movements grow are discussed. There is also consideration to how each of these activities strengthens positive peace through the 4G Solution.

The next subsection focuses on what businesses are doing to contribute to my reconceptualization of progress. The focus is on businesses in the United States, but an international model is looked at for further analysis and possible replication in the United States. This section focuses on cooperatives and sustainability incubators. Again, I examine how each business model feeds into the 4G Solution or utilizes alternative measuring techniques and fits within my reconceptualization of progress.

The following subsection focuses on the activities local governments and policymakers have taken towards sustainability. This highlights progress within urban areas theoretically using the new indicators of progress I have selected as the best for local communities. As well, an examination of how they help create the 4G Solution. Also included here is a look at some existing social services that could be impacted by an alternative way of evaluating them such as libraries or parks.

I also look at some of their failures through reviewing how policy may have hindered sustainability movements. Discussion of a few subsidies that were given to companies in depressed communities where the corporation failed to meet up to its promise and there was no accountability will also be pertinent. This reveals how these already strapped-for-cash local governments are squandering precious subsidy money to perpetuate the previously mentioned 4G syndrome. I believe that current subsidies are being squandered on large corporations that end up falling short on their promises and that these subsidies would be more beneficial to the city if given to local sustainability activities.

The final subsection in this chapter summarizes my findings and what I feel are the most useful techniques or movements that local governments and policy, especially in depressed urban areas, should concentrate their efforts on for maximum community progress. This section provides potential ideas for sustainably thinking entrepreneurs. If I find that one project has more weaknesses than strengths I also provide suggestions in how they could improve their sustainability for the well-being of the community, the environment, and their own existence.

The limitation in this section is that for the scope of this research it is impossible to look at all aspects of public policy in a city. The literature used in this section is from the organization Good Jobs First and on the book “No More Candy Store: States and Cities Making Job Subsidies Accountable” by Greg LeRoy (LeRoy 1996). I also seek alternative sources and determine the key factors in local policy that are either making a local community progressive or regressive.

The conclusion explores the implications of this research and how it could be used to move forward or rethink sustainable development as well as make changes to current public policy. I believe that it proves that a reconceptualization of progress and sustainability activities can be more beneficial at a local level than economic growth and it uncovers possible ways to make a more peaceable society.

Aims to Thesis

My hope is that sustainability activities and projects that may have been overlooked by local governments in development planning in the United States are seen in a different light with a reconceptualized view of progress and new tools for measuring success. I also anticipate that I will find that current policy is not maximizing the benefit that it could have for a local community.

Furthermore, empowered community members can see the importance of sustainability activities as an integral part of transforming the United States one local community at a time even if policy change does not occur. I want to provide multiple pathways because no one pathway can be the ultimate solution. The two main pathways I am focused on here are how community members can make their own communities more

sustainable and peaceable despite no policy change and also how public policy can be changed to promote sustainability. This thesis is contextual to the United States and may not work for every country, though I do provide some international examples that fit into my theoretical basis. It is my goal to have an impact in my home country and for this reason I have chosen this contextual research.

Methodology

I have used qualitative research techniques to collect data, which aim to provide insight into sustainable development, each case study, and the various movements discussed in this thesis. Furthermore, I use a combination of critical communicative methodology and narrative inquiry in the section about Lost Valley and the Village Building Convergence because the research was framed around my integration into this community for one month. These field studies showed me that each movement explored within my research has a narrative within it, that through inquiry and field notes I can study the subject material within this thesis at a deeper level. Richard Giovannoli (2013: 5) describes narrative inquiry as “A way of understanding experience. It is collaboration between researcher and participants, over time in a place or series of places and in social interaction with milieus.” This is extremely important to this research, as this field work shapes the components of what makes a peaceable society. It is also important to note that I chose to write these experiential sections in a narrative style to recount small details that provide meaning into the entire experience as well as to fully capture their narrative for further analysis.

I have also utilized the dialectical method by attempting to find solutions in the antithesis of some of the problems with a growth economy, Gross Domestic Product (GDP), and Alberto Gomes' 4G Syndrome. This research also includes a rather extensive examination into the areas of economics and sustainable development. Several sources are used to provide definitions for clarification. The idea is through these methodologies I am able to design and demonstrate a clear path on how to build a sustainable urban community and thus a more peaceable society.

For an activity to be considered for this analysis, it has to show potential characteristics that add to peaceability or sustainability. The examination of each case study pinpoints the various aspects of peaceability and sustainability within each activity. I have excluded several movements that would be great examples of both because of time limitations and the vast range of activities currently happening within the United States. United States examples are used whenever possible, but if an international example exemplifies several aspects of peaceability and/or sustainability, then it has been included in this analysis.

I also include my hopes for future research in my conclusion. I give brief descriptions of how each could be developed. These include: exploring the transferability of this research to other communities, creating a model for a sustainable peace business, and digging deeper into other aspects of public policy.

Chapter One: The Necessity for a Reconceptualization of Progress

Historical Views of Progress

Today if you ask the average person on the street what “progress” is they will most likely tell you that it is moving forward and making things better, but the concept of what we are moving forward and exactly what “things” we are making better is often not given a lot of consideration. The assumption with this basic definition is that in moving forward in a linear fashion we are making things better than in the past along this line, but it is impossible to assume that things are better today than they were in the past, that simply moving forward has an inherent betterment to it. This section aims to look at how progress has been viewed historically and bring us to the definitions of progress as well as other terminology that for the purpose of this thesis will be used as the current understandings of these words before any reconceptualization may be applied to them.

Merriam-Webster currently defines progress as “a forward or onward movement (as to an objective or to a goal); gradual betterment; especially: the progressive development of humankind” (Merriam-Webster 2013). Throughout history, it does not appear that the definition has changed much, but the ideas of what is forward or onward movement or gradual betterment have been markedly different.

The journey of progress could arguably be traced to the beginning of mankind, but for purposes of onward movement in this research the journey begins in Greece in the sixth century B.C. with Anaximander. His thought was that cosmic beings are in a perpetual transformation, that through endlessly recurring cycles it creates and absorbs new world-systems out of itself (Painter 1922: 259). Centuries before evolution theory

was formalized, he stated: “Animals appeared when the primitive liquid earth dried up and were originally fish in form; then some of them, adapting themselves to their new environment, became land animals” (Anaximander as quoted by Painter 1922: 259). At a rudimentary level this idea was the beginning of progress, the constant process of change and becoming.

At this time in ancient Greece was when “the independent self-conscious work of intelligence, which seeks knowledge methodically for its own sake” (Painter 1922: 258) began to take hold. This process of knowledge seeking is no longer progress as we understand it today, a gradual betterment of the human mind. Today’s world would not likely reward seeking knowledge just for the sake of knowledge as it has no economic justification for learning it attached to the idea. Perhaps, more pertinent for this research would be to explore the moment when the idea of progress and economic gain became interwoven.

Sure, there is still a conceptualization of progress unattached to economic gain, but it appears lost after American childhood. A teacher may say, “Billy has made a lot of progress in science” or a sports coach may utter, “Your game is progressing nicely”, but you are unlikely to hear this talk of progress at an individual level for similar knowledge or skill seeking activities in your thirties unless an economic gain is expected. Parents and society at large would no longer think Billy is progressing in science if he was an accountant. The exception may be in spiritual or personal development progress, such as yoga or a diet, which can be unattached to economic gain, but no longer in knowledge seeking outside of these realms. Simply put, no one in the United States goes to

university to purely better themselves through obtaining more knowledge, rather they intend to better themselves through what obtaining that knowledge can do for them in the job market. I would argue this to be the case regardless if they enjoy their field of study, namely because of the high cost of American tuition combined with the current mentality of the purpose of higher education. On a societal or community-level I would argue the same. Cities in the United States are primarily judged on economic growth rates, and any city with a negative growth rate would never be deemed as progress or a gradual betterment.

So, when did progress and economics become entangled and when was pure knowledge seeking no longer viewed as progress? It was not anything that happened overnight, rather it can begin to be traced back nearly as far back as Anaximander himself. A couple hundred years later we come to Plato with similar but more evolved views of progress. He viewed man as trying to recapture his lost paradise through seeking knowledge and goodness (Painter 1922: 262). Further than this, he realized that some degree of physical comfort was desirable in the early stages of a civilization, but he believed that beyond that economic development should be “evaluated by the employment of leisure it provides” (Bassett 1928: 468). Not only does he begin the merging of economics and progress, but he also begins the discussion of indicators for progress.

Plato further develops his views on progress by observing it as in the lower realm of “becoming” not the higher realm of “being”. Thus, progress is a process that can be completed and then cease to exist. In writing of an ideal city, the community would be

working towards its destiny and once achieved could just go on “being” rather than progressing any farther. The inherent problem with this idea would be in determining who decides when a city has reached this destiny. Plato’s answer lied in a philosopher ruler to make these determinations, and if given a new place to build a city from scratch, it was in his opinion possible only for the philosopher to create this destiny for others by carefully selecting the best parts of the best cities to construct this new haven (Lodge 1946: 651-653).

In ancient Greece there was also Aristotle who added to this discussion by pondering happiness. In determining that happiness is essentially the “chief good” of society and should be the end above all other ends in what a society should be trying to achieve, he also argued that some sort of prosperity was necessary to achieve happiness. This marks the realization that society should be moving towards greater happiness, in the various forms for each individual, but he leaves what may define prosperity slightly open-ended. He does attempt to define happiness through virtuous activities, namely intellectual and moral and further states that one in politics should study and pursue virtuous activities more than others to achieve the “chief good”. Essentially, progress for a city-state in Aristotle’s view should be made by policy through politicians, though these politicians should be living through virtuous activities and have a principle goal of achieving the ultimate end of happiness for its citizens. This is a far cry from how politicians act today or how the United States views progress (Aristotle NE Book 1).

To uncover how the United States came to view progress as more attached to economic growth one needs to look a couple millennia forward into the 18th century.

No person has had more of an effect on how the United States views progress today than Adam Smith, the father of classical economics. Shaping the idea of division of labor further than thinkers before him, creating the notion of the invisible hand that controls supply and demand, free trade, and self-interest as a means of generating wealth nationally are the main concepts attributed to Smith, though several important underlying messages in his book are often overlooked (Smith 2005).

How Adam Smith helped form the idea of progress being linked to economic growth is first evident in his butcher example:

It is not from the benevolence of the butcher, the brewer, or the baker that we expect our dinner, but from their regard to their own interest. We address ourselves, not to their humanity, but to their self-love, and never talk to them of our own necessities, but of their advantages. Nobody but a beggar chooses to depend chiefly upon the benevolence of his fellow-citizens (Smith 2005: 19).

Here he forms the idea of self-interest. He further goes on to discuss how this makes each person more productive by pursuing the trade of their choosing and doing it well, thus increasing the wealth of the country through human labor capital and efficiency. Though he really cements the idea of economic growth as progress when speaking of what a “thriving” nation can accomplish:

The increase of revenue and stock is the increase of national wealth. The demand for those who live by wages, therefore, naturally increases with the increase of national wealth and cannot possibly increase without it. It is not the actual greatness of national wealth, but its continual increase, which occasions a rise in the wages of labor (Smith 2005: 62).

Taken out of context, one may assume here that the magic recipe for the well-being of citizens is a continual increase in national wealth or GDP more simply, but one would be wrong. Not only is it evident in today’s stagnant wages despite a continual

increase in GDP, but Smith himself also realized it, in the same book that has perpetuated the idea. He speaks of the stationary state of China at that time, which had expanded its economy as much as its institutions and laws permitted (Smith 2005: 64). He later even describes the possibility that even without potentially faulty laws that prohibit more growth, it could be possible for a country to reach a point of such opulence that profits would inevitably become low, wages would continue to decrease and competition for employment in saturated industries would grow fierce. He even appeared to acknowledge the limits to land capital when noting that theoretically a country could also reach its limit of growth based on “the nature of its soil and climate, and its situation with respect to other countries” (Smith 2005: 82-83).

On one hand, progress and economic growth began with Adam Smith, but on the other it appears that modern economists chose to pick and choose what parts of Smith’s inquiry they wanted to listen to while ignoring the ominous reality of stagnation that he predicted when a country could grow no more. A key to this could lie in what Richard Heinberg, author of *The End of Growth*, calls “the gradual deletion by economists of *land* from the theoretical primary ingredients of the economy” (Heinberg 2011: 36). Though Adam Smith created many of these ideas, it is also important to know the context of his writing. The book was first published in 1776, when the United Kingdom was on the brink of losing control of the colonies in North America and when international trade and labor were not nearly as “efficient” as today. Furthermore, Smith was assuming that one would prefer supporting domestic industry over foreign industry when speaking of concepts like the invisible hand that are unknowingly allowing people to better society without them realizing it (Smith 2005: 364).

In the end, the damage was done. Progress was linked to economic growth and the establishment of assuming one would invest their capital only in what would bring them the most profit became the mantra of economic thought. Building on Smith's ideas, other thinkers around this time like Thomas Robert Malthus also promoted classical economics, though he also acknowledged the limits to growth, namely through his writings on overpopulation not allowing subsistence for all (Rutherford 2007: 213). John Stuart Mill, a mid-eighteenth century economic philosopher added to this idea of a limit by stating: "It must always have been seen, more or less distinctly, by political economists, that the increase in wealth is not boundless: that at the end of what they term the progressive state lies the stationary state" (John Stuart Mill as quoted by Heinberg 2011: 36).

It is astonishing that with all the forewarning by several prominent economists that in the end society by and large decided to ignore these aspects in the field of economics and in its conceptualization of progress. While these thinkers laid a lot of the groundwork of economics and how we view progress today, their time still did not see the runaway train that the economy has become today. Multinational conglomerates did not dominate markets, technological efficiency was nowhere near what it is today, and an internationally exploited labor force was not plausible.

The economic progress train, which today is essentially akin to progress (at least politically) really began to pick up speed with the onset of both Keynesian and new classical macroeconomics. These are the two main schools of economic theory today. These concepts do not only differ theoretically, but have become polarized political

opponents as well.

John Maynard Keynes was a British economist and his seminal work, *The General Theory of Employment, Interest and Money*, was published in 1936 amidst the Great Depression. In this work he outlined several tenets of his theory. He theorized that demand changes because of many things both public and private, and it can behave with volatility. He also theorized that these changes have the most effect on output and labor. Furthermore, he argued that this would result in periodic shortages and surpluses of labor. The surplus of labor would create unemployment, which is not ideal. To curb unemployment, the government should have stabilization policies, namely the government should increase their spending (Blinder 2008). We also see that land capital no longer figures into the theory.

Keynesian economics also includes a multiplier effect that makes this government spending even more efficient. Essentially, if a government injects \$100 billion into the economy, this could raise output by \$150 billion, but the multiplier could also be less than one, making the government spending not as economically efficient (Blinder 2008). The problem here is that output is not really defined. Could output include things that add to structural violence or environmental degradation? Most likely, yes. In essence, Keynesian economics would argue that recessions and depressions are economic illnesses that can be corrected with stabilization. Thus, if growth is not happening our governments should take on more debts to hopefully pay it off with a large multiplier. There were critics who argued with Keynes, saying that his approach focused only on the short-term without thinking of who may pay in the long-term, to which Keynes would

famously reply: “In the long run we are all dead”. Not exactly a sustainable way of thinking.

In any case, Keynesian economics ruled the economic world until the early 1970s when stagflation, a time of both high unemployment and high inflation was occurring. This obviously opposed Keynesian thought, so members of the Chicago school of economics, namely Robert Lucas along with Milton Friedman, began to question Keynes’ theory. What emerged became new classical Economics. It differs from Keynesian on several key points. In times of a decrease in demand, it does not believe in stabilization policy to decrease unemployment because it sees no positive trade-off between lower unemployment and higher inflation. New classical economists also believe that an increase in unemployment is the result of a market imperfection, like labor unions or government intervention (Hoover 2008).

Furthermore, it would be better during these times of high unemployment if firms could cut wages as low as workers will accept to optimize profits and wage cuts would be accepted by their workers because they would know there was someone else willing to work for less. For a firm to not do this is irrational. The assumption is that during high demand times wages will increase again and workers will work more, while during the slow times people may choose to work less and enjoy more leisure. They also argue that involuntary unemployment does not exist because a person always has a choice because of their human capital to take an easy lower-paying job or stay unemployed to keep searching. They realize the choice might be bad, but it is a choice nonetheless (Hoover 2008).

New classical thought assumes a lot of rationality in a firm and in an individual. This is problematic because it also assumes an individual understands the marketplace clearly. It is also somewhat idealistic with firms and does not account for greed from top-level managers. It also does not take into consideration involuntary unemployment for unskilled workers with little human capital built up. If an entry-level worker cannot find work even at the bottom-level, would not this be involuntary unemployment?

It could be possible for these theoretical ideas to work in a worker-owned cooperative environment because lower wages would be distributed evenly in hard times and increased equally in good times. With higher participation in ownership, workers would be willing to take wage cuts because the firm is their own and they know they will share in the profits by optimizing in the short-term. Outside of this realm, new classical economics tends to think of people as rational robots who will always make the correct decision. It is evident why E.F. Schumacher felt the need to write *Small is Beautiful: Economics as if People Mattered* in 1973. People and the environment seem to have been replaced by profit maximization and an idealistic rationality, and this needs to change.

Definitions

It is important in this work to give firm definitions so that no assumptions will be made as to the content and terminology used in this text. For the most part, these definitions come from popular thinkers and standard definitions, though I have made various changes to some of them based on my own experience and research. The definition of progress will change after Chapter Two, but I felt it necessary to provide a

current conceptualization of it.

For now, the working general definition of progress throughout this thesis before any reconceptualization is made, shall be that progress is a gradual betterment in all aspects of life, though currently tied to economic growth. Other key definitions to take into account are sustainability, sustainable development, peaceability and community. These concepts will be present throughout all of the chapters and are thus important to understanding. Though definitions may change in my reconceptualization it is important to recognize current widely held meanings in order to assume some meaning in this text.

Beginning with sustainability, I will be using Alberto Gomes' definition of "the capacity to endure or thrive within the natural limits in the sense of ecological sustainability as well as the capacity to maintain social lives and well-being *sui generis* in terms of social sustainability" (Gomes 2012: 1065 emphasis in original). Going in hand with this definition is sustainable development. The most widely known definition continues to be from the 1987 Bruntland Commission stating it as development that "meets the needs of the present without comprising the ability of future generations to meet their own needs" (Bruntland 1987: 15). This definition is a bit ambiguous and for that reason I will be defining sustainable development as any development activity that could continue infinitely without harm to this or future generations. This definition forces a closer look at the activity rather than anything else. A huge factor in determining this new definition was in my time spent at the Lost Valley Education Center. There was several sustainable development projects that we worked on that did not necessarily meet the needs of the present, such as permaculture, yet they would create a system that could

exist infinitely or be repeated infinitely and provide benefit in the near and distant future. To force the needs of the present into the definition of sustainable development would essentially exclude any activity without instant need gratification, but with great future potential.

Peaceability is much more than just the ability to make peace, whether it is through various activities, language or institutions. It is important to distinguish that beyond this, these things must be enabling or creating a space for positive peace to grow. The distinction of the two peaces was made by Johan Galtung, that peace “has two sides: *absence of personal violence* and *absence of structural violence*. We shall refer to them as *negative peace* and *positive peace* respectively” (Galtung 1969: 183). Most basically, Galtung describes the condition of structural violence as social injustice. Thus, peaceability could be viewed as any activity that is building a condition of social justice (Galtung 1969: 171).

Community is perhaps the most difficult word to define simply because it often evokes a very personal and different meaning for individuals. One may see community as the entire world, cyberspace, their country, their town, their neighborhood, their religion or their place of worship. For this reason, I feel it is pertinent to make the definition of community a bit more ambiguous. Throughout this text community will be defined as a group of people with a shared interest or common purpose.

Shortcomings of a Growth Economy and Limitations of Current Indicators

The daily news is rampant with stories about the economy, namely reporting on the health of the economy by determining if we are growing or not. The largest indicator of this on a national scale is with Gross Domestic Product (GDP) (Heinberg 2011: 6-10).

The idea is that the economy and the country are progressing if GDP is increasing or growing, but there are two major faults inherent with this line of thinking. The first lies in the obsession that growth is healthy, the second is that GDP is a good way to measure this growth.

The Problem with Growth

When we are children everyone can agree that it is healthy for us to grow. Growth brings about some developments in our physical makeup that make us strong enough to survive and thrive in this world. Imagine if some people just continually grew, would the world view it as healthy once they were towering over all of us and consuming at least six times as much as others? Of course not, yet this is the United States. We are the children that grew up to be healthy adults, but decided to keep growing despite having no need to grow further. As McKibben (2007: 184) states “Each of us uses 6 times as much energy as the average Mexican, 38 times as much as the average Indian, 531 times as much as the man in the Ethiopian street”. The rates are alarming enough, but if the wonders of growth are continually sold outside the United States as well, it is difficult to think about what the world would look like with another few hundred million or even a billion more “giants” walking around.

Another enlightening analogy of viewing growth as progress goes like this:

Suppose we are on a progress-train, he said, running full speed ahead in the approved manner, fueled by the rapacious growth and resource depletion and cheered on by highly rewarded economists. What if we then discover that we are headed for a precipitous fall to a certain disaster just a few miles ahead when the tracks end at an uncrossable gulf? Do we take advice of the economists to put more fuel into the engines so that we go at an ever-faster rate, presumable hoping that we build up a head of steam so powerful that it can land us safely on the other side of the gulf; or do we reach for the brakes and come to a screeching if somewhat tumble-around halt as quickly as possible? Progress is the myth that assures us that full-speed-ahead is never wrong. Ecology is the discipline that teaches us that it is

disaster (Leopold Kohr as quoted by Sale 2013).

The point I am trying to make is not that growth is inherently bad, but more that infinite growth is unsustainable, unhealthy and unrealistic. The United States has been on a path of attempting infinite growth on a finite planet since World War II and this path needs to be reexamined. Recent events like the 2008 financial crisis make this reexamination of our goals as a country more evident. Even more telling, is that happiness has not increased since 1950 despite living standards doubling in the United States (Layard 2005:29). Depression more than doubled from 1992 to 2002 from 3.3 percent to 7.06 percent, and it has likely increased further since then (Jones 2006). If growth is not making us happier it makes one wonder why we so ardently pursue it?

In the opening pages of Richard Heinberg's "The End of Growth", he argues "that global economic growth is over because of a convergence of three factors- resource depletion, environmental impacts, and systemic financial and monetary failures" (Heinberg 2011: 15). From history we could see economists hinting at the limits to growth even though they could not imagine how much growth could exist, today we live in a world of peak oil, climate change, pollution and scarce resources. Surely, the problem with growth is obvious, we live in a finite world, thus we cannot grow and consume infinitely. Nevertheless, several academics continue to argue that infinite growth is possible.

Strikingly, one such academic is Eamonn Butler, author of *The Condensed Wealth of Nations*, whose aim was to make the *Wealth of Nations* more accessible to people today by “translating” the language to today’s lingo. When he speaks of Smith noting the limits to growth he asserts its irrelevance:

Today we see no limit to economic growth. Our capital and technology give rise to all kinds of new business sectors and opportunities for employment. In Smith’s time, however, the economy was dominated by agriculture, and he mistakenly sees the impossibility of developing land beyond its fertility as a limit to economic growth (Butler 2011: 24).

He does not address the issue of desertification nor does he place any importance of land as capital, and he is not alone in this line of thinking. Many politicians along with ordinary citizens believe that technology will save the day and that the planet can be dominated without any repercussions. Of course technology has drastically improved in recent years, but one short look at carbon emissions will show a steady increase despite new technologies. Technology tends to improve most in the areas that provide the most economic growth, not in the areas necessary to sustain on a devalued planet.

On top of infinite growth being impossible on a finite planet, it is also a detriment to peaceability. How can society create a world with positive peace if economic growth is rooted in constantly finding cheaper labor to exploit or depleting our resources to a dangerous level? As mentioned earlier, Americans currently consume much more than the rest of the world so that we can continue to feed our growth system, we do this even at the cost of inequality, pollution and social injustice in our own country. The 4G syndrome in a later section in this chapter will better describe these structurally violent effects growth is having on the United States.

Limitations of Current Indicators

Gross Domestic Product (GDP)

In Marc Fleurbaey's work "*Beyond GDP: The Quest for a Measure of Social Welfare*" he states:

GDP statistics measure current economic activity but ignore wealth variation, international income flows, household production of services, destruction of natural environment, and many determinants of well-being such as the quality of social relations, economic security and personal safety, health, and longevity (Fleurbaey 2009: 1029).

Gross Domestic Product (GDP) has long been the indicator for economic growth, and economic growth has long been touted as the best way to measure the progress of development, but from looking at Fleurbaey's observations of GDP we can see that it is lacking. Possibly the most striking to me is his observation that GDP actually rises if "rising crime, pollution, catastrophes, or health hazards trigger defensive or repair expenditures" (Fleurbaey 2009: 1029). The phenomenon of rising crime being good for GDP was echoed by Dr. John Talberth when he pointed out that "each year, Americans incur nearly \$40 billion in crime related costs" (Talberth 2006: 2), which of course all increase the GDP. I suspect no one would champion for higher crime rates to boost the GDP, but essentially this current indicator does just that.

All this also means that the recent BP oil spill in the Gulf would actually increase the GDP of the United States because of the money spent to repair and clean up the disaster. In essence, "pollution is a double benefit to the economy" (Talberth 2006: 2). By all accounts, this furthers the "progress" of development in the United States at the expense of the environment and by creating new insecurities for current and future

generations. Looking deeper, we could think of a heavy manufacturing plant in a city that polluted the lakes, thus forcing citizens to buy bottled water as a triple benefit to our “progress” of development, once for the money generated by the unclean production, twice through the money spent on the needed bottled water and possibly again through the money spent on the clean up of the lakes. Obviously, this leaves GDP lacking as a true measure of progress. Fleurbaey and Talberth are not alone in this realization, several economists, social scientists and even presidents see the weaknesses of GDP.

In the midst of the 2008 financial crisis, the then French president, Nicolas Sarkozy asked a group of economists, Joseph Stiglitz, Amartya Sen and Jean-Paul Fitoussi to form a commission to investigate the reliability of GDP. The work more broadly publicized the shortcomings of GDP and formed the book *“Mismeasuring Our Lives: Why GDP Doesn’t Add Up”*, which came out with its findings in 2010. Sarkozy, in the book’s foreword, very poignantly states the importance of examining GDP when he states: “The kind of civilization we build depends on the way we do our accounts quite simply because it changes the value we put on things” (Sarkozy 2009: xiv). The importance of this book marks a significant moment when a major world leader publically acknowledged and wanted to address the shortcomings of GDP and potentially how nations evaluate themselves.

Key points in the text often echo the ideas that many other ecological economists as well as other modern economists have already stated, but the more international commission does offer further insight into the shortcomings of GDP while realizing that policy change is often slow and offering recommendations for current policymakers. The

main new insight into the shortcomings of GDP that they found was that “complex financial products are an example where consumer ignorance prevents market prices from playing their role as carriers of correct economic signals” (Stiglitz 2010: 25). This meaning that the market cannot do its job and GDP could be overstated because market price in this sector may be manipulated or inaccurate.

At times the book does not seem drastic enough and at others it appears too vague, but some of its recommendations work as great starting points before looking at alternative indicators. Some key recommendations include: broadening income measures to include non-market activities like volunteering or child or elder care, including distribution indicators along with average measures of consumption, income and wealth, assessing inequalities in well-being indicators, and improving the empirical measurement of health and education services, which are not currently included in GDP (Stiglitz 2010: 13-26). Their research does not act as a magical recipe for dealing with the problems inherent with GDP, but the formation of the commission was historic and definitely adds to the discussion.

Thus, as Robert Kennedy so eloquently stated, “It measures everything, in short, except that which makes life worthwhile” (Kennedy quoted in Costanza 2009: 7). Even the creator of GDP, Simon Kuznets, warned against using it as a measure of economic or social well-being, yet organizations like the IMF and World Bank continually use it to determine which projects to fund or not (Costanza 2009: 4). It would appear absurd that any project would be green-lighted solely because it would increase GDP, but this continually happens. Using this logic in policy could mean that a local government

looking at two proposals, one a community garden that would provide fresh vegetables to a neighborhood and be run by volunteers to keep costs low could be passed over for another proposal from a toxic waste processing plant that will pollute the area and increase personal health care costs by contaminating land with carcinogens to the local population. While the first project will decrease the overall economic activity of the community, it would be argued by most that it would definitely be better for the community.

As Talberth argued, it would be like a business assessing their financial well-being by “simply adding together all ‘business activity’, thereby lumping together income and expenses, assets and liabilities” (Talberth 2006: 2). This would obviously not work in the business world, so it is alarming that we allow it as a measurement for all of society. Beyond the absurd shortcomings of GDP is also the very real limitation that it does not measure the informal economy, which accounts for about nine percent of the official GDP in the United States and involves more than 25 million people. On top of this, an infinitely increasing GDP is unsustainable. The necessity of a different measure of progress is apparent and well explored, but the debate over which indicator could potentially replace GDP is not over.

Human Development Index (HDI)

The idea of the HDI was created by Mahbub ul-Haq and brought to reality by Amartya Sen. Though Sen was reluctant to make a crude composite index, Haq was able to convince him that it was the only way to compete with GDP at this point by coming to one number, while still considering some social aspects (Stanton 2007: 14).

HDI uses GDP per capita to come up with a standard of living, but it also factors in life expectancy and education. Countries are rated on a scale of 0 to 1 in terms of their fulfillment of each on the scale.

The major limitation of the primary HDI is that it currently does not measure inequality within a country, but there is an Inequality-adjusted HDI in existence as well. For example, the United States ranks fourth in the primary HDI with a score of .910, but when inequality is accounted for the score is only .771, dropping it to twenty-third place (Klugman 2011: 134). This is especially important to consider when measuring progress in depressed cities, which may not accurately be portrayed in the primary HDI number in terms of progress.

HDI could potentially hold some key components that should be further explored within individual countries. Being that universality of progress is impossible to calculate, it is important that HDI be determined contextually as well. For instance, HDI computes education through literacy rates and school enrollment, but literacy can almost be assumed in the United States, so other factors to determine quality of education should be used instead. Perhaps, national test-scores could be used to determine differentials within the country coupled with school enrollment. In depressed cities, where education has declined because of the loss of their tax-base, this would provide a clearer picture of reality. Also, when considering the health aspect only through life expectancy we cannot determine the quality of their health through the duration of their lives, but only that the system was able to keep them alive for a long duration.

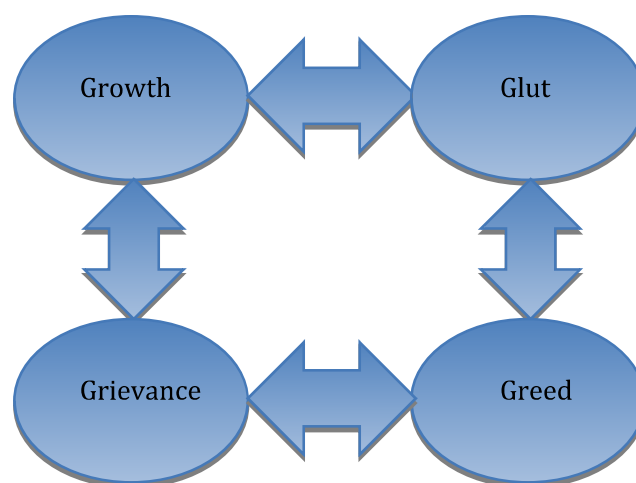
In any case, HDI does give a human face to progress, but it still lacks an environmental aspect. As well, the standard of living portion is determined with income, which does not factor in non-monetary income or production. If an urban gardening project in Detroit is providing free food for twenty people, or a reforestation project is reducing CO2 levels, these cannot be computed with the HDI indicator locally to measure progress of development.

The Growth Economy Through the 4G Syndrome

I suggest that the foundations of peace cannot be laid by universal prosperity, in the modern sense, because such prosperity, if attainable at all, is attainable only by cultivating such drives of human nature as greed and envy, which destroy intelligence, happiness, serenity, and thereby the peacefulness of man (Schumacher 1973: 19).

The 4G Syndrome (defined as Growth, Glut, Greed and Grievance) is an analytical framework used by Alberto Gomes to explain the vicious cycle that is created through a growth-based economy (See Figure 1) (Gomes 2012: 1060).

Figure 1: 4G Syndrome (Gomes 2013).



Each component feeds into the next and vice versa. The demand for continual economic growth leads to a glut of products in the marketplace beyond what is necessary. This glut then leads to an accumulation of products leading into greed. As consumerism grows it is inevitable that “the greed of some leads to the grievance of many” (Gomes 2012: 1061).

The importance of this visual tool lies in its simplicity, but it is important to further examine each of its components to really see the structural violence that is being perpetuated with a growth economy. The trigger is the need for economic growth, without this component there would be no need for an over saturation of the market of products that we do not need, and if we need continual economic growth the glut of products must be ever-increasing. It could be argued that glut does not necessarily lead to greed and theoretically that may be right, but in reality it does just that. The more products that come out, the more Americans feel the need to amass as many as possible. Products are advertised to give feelings of well-being, status or achievement despite them rarely delivering on this.

The most striking component is the grievance that the cycle inevitably leads to in society. As Gomes puts it: “Many marginalized people and communities have been aggrieved as a consequence of being exploited, excluded, discriminated and dispossessed” (Gomes 2012: 1061). Americans begrudgingly acknowledge this fact, but for the most part we ignore it because we feel this is happening elsewhere. Despite the moral implications of forming this apathetic view of the other, it is also somewhat misled. In reality, a lot of these marginalized people and communities exist within the

United States. One such example would be the town of Dish, Texas. A small town of only 225 people, they are one of several small towns that have exploited and dispossessed by the natural gas industry in the United States. In an effort to continue down the disastrous path of economic growth, natural gas has begun being drilled at an alarming rate across the United States, often in small rural towns like Dish. In a place once described as serene, there is now smoke billowing from natural gas sites. Half of the population has reported pollution-related health problems, but because it was administered by the community, the scientific backing does not hold up to the power of the natural gas companies. There are reports of nosebleeds, respiratory problems, and increased cancer cases, unfortunately they do not have the means to prove anything. The previous mayor even moved out of the town over concern for his son's severe nosebleeds that always started when the smoke was really bad (Hamilton 2012).

Their grievances are real and most likely the gas companies are directly to blame, but it could be said that the growth system is at the core of this problem. The requirement for growth has often led our politicians to deregulate or allow potentially dangerous industries to enter our towns because to hinder economic growth, whatever the cost, would be detrimental to their political careers. This in turn creates the glut of a product like natural gas that while it is profitable, it is hardly a dream transition fuel. Then of course the greed takes over, as gas companies try to get as much natural gas as they can with little regard for town residents. In turn, the grievances inevitably start piling up as these people feel powerless to the gas companies. Imagining a system where growth was not necessary, it would be likely that the cycle would be different.

Perhaps, finding a way out of this cycle can be done through an examination of its antithesis. Looking at each of the four Gs separately we can begin to construct an opposing model. If economic growth is a trigger that starts this process, then its opposite, de-growth or changing the conception of growth or progress could begin a new cycle. Glut in the marketplace would then be sustainability or limiting consumption. Greed would be replaced with equality or generosity, and grievance would become dialogue. These various opposites resemble the Equality, Sustainability and Peaceability (ESP) model also introduced by Gomes, which is an AlterNative Social Ecology (Gomes 2012: 1061-1062). In a later chapter the idea of using a dialectic method to find a solution to this syndrome will be explored more.

Conclusion

The idea of progress has been around for millennia, but the idea of progress being linked to economic growth is a more recent development. This has put the United States and other countries on a mission to achieve infinite growth, which is most notably measured by GDP. There are two major problems with this view of progress. The first is the assumption that infinite growth is good and the second is that GDP is a good way of measuring a country's well-being.

The main problems with growth are that it has led to an American society that consumes more than the rest of the world. Though we may tout that we are helping people in developing countries through our consumption and that we one day hope they can have the same standard of living as us, the truth is that the planet could not sustain another billion American consumers. Growth is unsustainable, unhealthy and unrealistic and must be reevaluated. Beyond this, growth has not made us any happier despite our

increases in standard of living. There is no reason to continue chasing something that is not increasing our well-being and acts as an obstacle to creating a peaceable society.

The way we have been measuring growth, or more accurately the “progress” and “well-being” of society has been with the GDP indicator. While GDP does well to measure production, it has several limitations. One key limitation is that the costs of crime, environmental and natural disasters actually boost GDP, giving a country the false impression that the economy is doing better. Also, there is no account for environmental degradation, no value put on volunteering, child care or elder care, no measurement of the informal economy, and no way to indicate inequality. All these limitations make it necessary to explore alternatives for measuring a nation’s well-being.

The previous sections can simply be explained in Alberto Gomes’ 4G Syndrome of growth, glut, greed and grievance. It is here that we can see the structural violence that is being perpetuated in the United States by the vicious cycle that growth triggers. Using a dialectical method, it could be possible to get out of this cycle by looking at the antithesis of the various components.

Chapter 2: Moving Beyond the Traditional Economic Growth Model

Alternative Indicators of Progress

After determining that GDP is insufficient, that “GDP is a measure of economic quantity, not economic quality or welfare, let alone social or environmental well-being” (Costanza 2009), it is important to explore some of the alternatives to GDP that could aim to replace it as a widely accepted tool to measure progress in a country or a city. The alternatives that will be explored here are Gross National Happiness (GNH), the Genuine Progress Indicator (GPI), Happy Planet Index (HPI), The Global Peace Index (GPI) or more specifically its United States Peace Index (USPI) and Triple Bottom Line (TBL). The details of each will be examined as well as their implications if applied at the local level.

This chapter will also take a closer look at degrowth and no growth economic models to determine if an alternative indicator for progress would be sufficient or if the current economic system needs a complete overhaul. Benefits as well as limitations of converting to a degrowth or no growth society will also be examined. The possibility that a degrowth or no growth economy could complement various alternative indicators will also be taken into consideration.

Most importantly, this chapter will look at all these alternative conceptualizations of progress and aim to reconceptualize how a local community could view progress. The conclusions drawn from this chapter will help uncover the real progress of various sustainability and peacebuilding activities as well as impact possible policy change

recommendations. The importance of reconceptualizing progress falls in line with Sarkozy's previously mentioned observation that how we build society is dependent on how we measure society because it determines the value we put on various things (Sarkozy 2009: xiv).

Gross National Happiness (GNH)

Gross National Happiness was a term first created by King Jigme Wangchuk of Bhutan back in 1972 to bring holistic values into economic development policy (Jones 2006). Originally GNH had four pillars: "economic self-reliance, a pristine environment, the promotion of culture, and good governance in the form of a democracy" (Jones 2006). It was not created as an index, but rather as guiding principles (Costanza 2009: 18). Theoretically, there are many parallels with E.F. Schumacher's "Small is Beautiful" when he is discussing Buddhist Economics, not surprising since GNH has its roots in a Buddhist country. Each pillar from the original intent of GNH can be seen reflected in Schumacher's work and it is useful to explore these similarities, which provide a greater understanding of all that GNH could potentially measure.

Looking at the first pillar, economic self-reliance we can determine this as an individual or a community-based economic self-reliance. As Schumacher pointed out, "people who live in highly self-sufficient local communities are less likely to get involved in large-scale violence than people whose existence depends on worldwide systems of trade" (Schumacher 1973: 62). Living without fear of direct violence could definitely be said to enhance well-being, thus measuring this type of happiness could prove useful. Though beyond the lack of direct violence, Schumacher points out that one

function of work should be for a man to utilize and develop his skills or abilities as much as possible (Schumacher 1973: 58). In a way, this could also be in line with this first pillar of economic self-reliance because an individual that is given the opportunity to continually enhance his faculties would surely be more economically self-reliant as well as more prepared for change than an unskilled pin maker in the division of labor example of Adam Smith.

Looking at the second pillar of pristine environment we can again see the Buddhist principles that Schumacher pointed out. With modern economics not distinguishing the difference between renewable or non-renewable resources, he argues that the frivolous use of non-renewable sources could be viewed as violence against nature, especially in the context of the Buddhist philosophy (Schumacher 1973: 64). It is hard to deny that happiness would be impossible with an uninhabitable environment. A pristine environment may be a far-off goal, but this pillar is nonetheless a valiant goal to obtain or measure.

The third pillar of GNH, the promotion of culture, is not only seen through Schumacher's Buddhist Economics, but its demotion can also be seen through modern economics by looking back at Adam Smith's pin-making example. Schumacher argues that the destruction of culture can be seen when examining the distinction between a machine and tool. When a tool is used, it can help a craftsman to hone his skill, but when a machine takes over it often makes the human's work insignificant and often requiring very little skill. This in itself does not allow a human to utilize their abilities to the fullest and can also cause a breakdown of cultural customs or heritages (Schumacher 1973: 57-

59). Reflecting back on Adam Smith's division of labor pin example that it is best to divide work into several minute tasks for maximum production, Schumacher argues that this hardly progressing culture, the individual or his skills.

The true importance of including the promotion of culture in an indicator can be seen most fully when Schumacher mentions that "a modern European economist would not consider it a great economic achievement if all European treasures were sold to America at attractive prices" (Schumacher 1973: 64). Realizing the truth in this statement exposes the priceless value of culture in a society. In finding a way to measure the promotion of culture it could uncover a form of progress or even security and stability that cannot be found in GDP.

The fourth pillar of good governance in the form of democracy could best be realized through the title "*Small is Beautiful*" or through his chapter "*A Question of Size*". Bhutan is a relatively small country, consisting of 750,000 people, roughly the population of San Francisco (Bhutan Tourism Corporation 2013: Kingdom of Bhutan). This should immediately put this contextual national index into a more local framework when wanting to replicate it. Beyond this, Schumacher describes the "smallness within bigness" (Schumacher 1973: 68) that many large enterprises end up dividing themselves into. Citing examples of General Motors and the British National Coal Board, he touches on the ability for good governance in a smaller unit even if it is within a larger organization. I feel it is important to look at this pillar and not attempt to nationalize its measurement, but to locally look at good governance policy in the form of democracy.

All these pillars, along with Schumacher's work add up to a worthwhile venture to attempt to measure a truer progress of a society. Though as it stands, each pillar is quite subjective or very difficult to measure with today's tools. For example, economic self-reliance for an individual or community would most likely comprise of several non-market activities, thus a way to measure these activities would be necessary though difficult to obtain. Also, pristine environment is extremely subjective. What I may interpret as a pristine environment could very well be an overgrown patch of invasive species, essentially meaning that a more scientific way to measure pristine environment is needed that takes some of this subjectivity out of the analysis. Thirdly, the promotion of culture could be viewed by some as hindering on an immigrant's right to celebrate their diversity or holding a culture back from more sustainable or ethical practices. An easy example of this would be the debate of bullfighting in Spain. The phrase "beauty is in the eye of the beholder" comes to mind. What some in a society may view as integral to their culture and thus want to promote, others may view as offensive. Measuring positive aspects of promotion of culture while remaining objective could prove more difficult than other pillars. Lastly, good governance in the form of democracy would need to be based on concrete points and would also be difficult to be objective.

Nevertheless, Bhutan, starting in 2005, has put these factors into a real GNH for its country. The early years of trying to compute a GNH proved difficult because of the remoteness of many of the villages as well as the length of time it took to administer the survey, typically five to six hours. In 2006 they were only able to have a pool of 350 respondents from different communities, while the latest GNH survey in 2010 had 7,142 respondents. Using 33 indicators across 9 domains ranging from health, resilience,

community vitality to health, they are able to get one number from 0 to 1. Currently, Bhutan's GNH score is a .743. Most interesting is that respondents who are not categorized as happy are labeled "not yet happy", which shows the optimistic nature of Bhutan (Gross National Happiness 2013).

In the United States, Med Jones is attempting to do all of this by taking the idea of GNH and creating his own index. Using seven categories: economic wellness, environmental wellness, physical wellness, mental wellness, workplace wellness, social wellness, and political wellness, he attempts to quantify the qualitative. The method is carried out through putting quantitative values on qualitative information through surveys as well as looking at statistical measurements, such as usage of antidepressants, pollution levels or crime rates (Jones 2006).

The various metrics appear to cover all aspects that are missing in other indices, but it runs into problems with gathering the data, being too subjective, and difficult for international comparisons. Getting enough people to answer the survey has proven difficult, as the survey was created more than five years ago without any results. Also, inherently in being a subjective survey it can be interpreted in many different ways, potentially by policymakers interpreting it in a way that reinforces their policies. The difficulty for international comparison makes it a good index for domestic comparisons, but the contextual nature of each country makes it impossible to have the same survey around the world.

At a local level I think GNH would have the best chance of making a difference. Collecting a large enough sample within a community is much more likely to create more

accurate results. An initiative could be implemented to distribute the surveys by neighborhood, which could provide valuable information about disparities in happiness even within a city. The results of this on a local level could also impact policy because it would be giving the policymakers a truer picture of what is lacking or working in a city. In many ways I think it should be renamed Gross Local Happiness (GLH) because comparison, even within one country, tends to breed competition and insecurity. Using it purely at a local level enhances awareness of issues or insecurities without a ranking, thus allowing a community to personalize the data more.

Genuine Progress Indicator (GPI)

Essentially, GPI is a green GDP. It accounts for environmental degradation and costs of crime, while also considering non-monetized market activities that may add to the sustainability of a community. It is a variant of the Index of Sustainable Economic Welfare (ISEW) that was created by Herman Daly and John Cobb in 1989 (Daly 1989: 443-507). It attempts to measure three things: “(1) welfare equivalent income; (2) sustainable income, and (3) net social profit” (Talberth 2006: 1-3). Welfare equivalent income focuses only the consumption aspects that are welfare enhancing, while subtracting consumption that may not add or may even subtract from welfare. Sustainable income takes into consideration consumption, but again only if that consumption leaves the person as “well-off” as they were before the consuming activity, meaning if the person’s consumption is living off the interest of the community’s capital or spending the capital down, then it would not be viewed as sustainable. Net social profit attempts to measure sustainability implications in policy changes (Talberth 2006: 3-

4) (Costanza 2009).

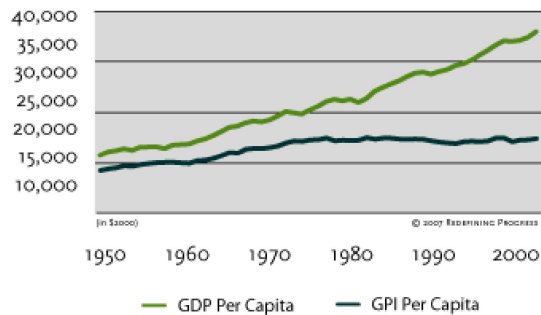
GPI does take into account GDP, but basically it adjusts this figure, so that it more accurately displays social progress. More simply, it takes the personal consumption numbers from GDP and makes deductions for things like costs of crime, income inequality, loss of leisure, and environmental degradation while it makes additions for things like volunteering, housework, reforestation and public infrastructure. Its use shows a more long-term vision and it attempts to correct the typical political shortsightedness of many of today's politicians (Talberth 2006:1).

Furthermore, its results are very telling. An increase in GPI indicates growth in the stocks of social and natural capital, which will be at least as great for the following generation. On the other hand, a decrease in GPI indicates that the current state of the economic system is depleting those stocks and limiting the potential for future generations to enjoy it (Talberth 2006: 2). Considering all these aspects puts much more meaning into its number than GDP.

Looking at the results in Figure 2 of GPI versus GDP in the United States it is evident that "progress" is not what we thought.

Figure 2

GROSS PRODUCTION VS. GENUINE PROGRESS, 1950-2004



(Talberth 2006: 19).

More consumption should not be viewed as a measure of progress even when that consumption is detrimental to the community. GPI has its roots from Herman Daly and John Cobb's Index of Sustainable Economic Welfare created in 1989 (Talberth 2006: 3). It is not as subjective as the Gross National Happiness, which gives it more scientific standing to replace the traditional model of GDP. GPI is made to be used at a local level and for local policy, so it would make it an excellent model for a city. Through its complex statistical calculations it can add in variables such as the value of housework and parenting while subtracting variables such as loss of leisure time and forests. Although, there is still some debate on the soundness of its methodology, its implications for city policy could be immense.

There are a few places where GPI is catching on, the state of Maryland perhaps being the best example in the United States. They have instituted a state GPI that includes 26 different indicators across the three categories of economic, environmental and social in order to measure the sustainable economic welfare of their state. Each indicator has its own page that shows the national average as well as how Maryland is

faring. Then, along the sides of each of these pages, it describes how policy is working to improve (sustainable indicators) or decrease (unsustainable indicators) each of the values (Maryland: Smart, Green and Growing 2013).

The site provides lots of useful information and shows what can be done at the state level to combat the misleading GDP but it does not provide city GPI scores, which could be even more telling and give people more a sense of ownership in their contribution to GPI. The use of GPI as a state is definitely an improvement, but research on its impact in policy and on the average citizen need to be further studied. It would be interesting to know if the average citizen in Maryland knows that they compute a GPI or if this is just the work of a mostly unknown committee.

Overall, GPI covers all the areas that other indexes miss, albeit in a slightly more complicated way. Despite the debate, it could be seen as useful that they have monetized all the indicators, so that they are more comparable. The limitation could be ease of use, like in the example of Maryland, where perhaps they give citizens too much information that it could prove overwhelming. Its strength would be in the index itself, its inputs and the final numbers. A clearer analysis of the final numbers with some interpretation of the strengths and weaknesses that those numbers reflect could make GPI a more widespread index and indicator of true progress.

Happy Planet Index (HPI)

HPI is generated by the New Economics Foundation (NEF) and since 2006 has been compiled three times. Essentially, it “measures a country’s ecological efficiency in delivering well-being” (Costanza 2009: 20). It takes into account life expectancy,

experienced well-being and ecological footprint. HPI creator, Nic Marks, speaks about how “the ultimate outcome of a nation is how successful it is at creating happy and healthy lives for its citizens” (Marks 2010). It remains simple and comprehensible with only a few components to provide an indicator of how well a country is doing. The formula can be seen below in Figure 3.

Figure 3

$$\text{Happy Planet Index} \approx \frac{\text{Experienced well-being} \times \text{Life expectancy}}{\text{Ecological footprint}}$$

The goal for a nation with this index is to have a high number of happy life years, which is the number HPI computes, for its citizens, while maintaining conditions so that future generations can as well. The organization has made a 2050 target for a sustainable world with the following numbers: an experienced well-being of 8.0, a life expectancy of 87, an ecological footprint of 1.7 global hectares (g ha), or an overall HPI of 89.0. To put this into perspective ecologically, the United States has a current ecological footprint of 7.2 g ha, meaning we would need four planets if everyone consumed the way we did (Abdallah 2012: 3, 10, 25).

Surprisingly, only 4 of the top 40 countries have a GDP per capita over \$15,000. This means that they are more efficient than the United States, placed at 105 out of 151, at delivering well-being to their citizens. Topping the list is Costa Rica with an HPI score of 64.0 happy life years, leaving room for some improvement, but they are definitely headed in the right direction. Costa Rica manages to deliver its citizens with a slightly higher experienced well-being and life expectancy than the United States, but

with an ecological footprint of only 2.5 g ha. Ecologically they are nearly three times more efficient than the United States at delivering well-being and a high life expectancy. Their policy and practices put them on track to continue increasing HPI. They currently receive 99% of their energy from renewable sources, they have reversed deforestation, and they have made a bold commitment to be carbon neutral by 2021 (Abdallah 2012: 14, 25).

Looking at its methodology, one realizes that it is even more thought out than the above simple equation implies. The life expectancy numbers come from the United Nations Development Programme's (UNDP) *Human Development Report*, while the experienced well-being numbers come from the Gallup World Poll's ladder of life question. This question asks respondents to imagine their life in a ladder with ten rungs, one being a miserable life and ten being the best life imaginable and to choose which rung they feel they are currently on. This method has been found to be highly correlated with other ways of measuring life satisfaction (Abdallah 2012: 19).

The most interesting aspect of the equation is the use of ecological footprint, which measures the amount of land that is required to sustain a nation's consumption. This indicator does not allow the 'exporting' of their impact, thus a product made in China but bought in the United States will count towards the United States, not China (Abdallah 2012: 8). This makes country's more accountable for the damage they are causing elsewhere. When we wonder how a product from China that has to travel thousands of miles can be so much cheaper than a product made down the street, ecological footprint exposes the hidden costs in this transaction. In fact, Costa Rica would have a lower

ecological footprint if it were not for many of its citizens importing goods from abroad from less eco-conscious countries (Abdallah 2012: 14). It should also be noted that the United States' footprint would decrease drastically if production is brought back home.

HPI stands out from several other alternative indicators because it does not use GDP anywhere in its findings, they feel that a happy life is much more important than a wealthy one, in fact, in several world surveys happiness, love and health continually rank higher than wealth in what people want out of life (Marks 2010). There are limitations to HPI and NEF recommends using it in conjunction with other alternative indicators to get a more accurate picture of how a nation is doing, but it feels HPI provides a lot of relevant data that could be used for policy change. Previously, HPI also did not measure inequality of life satisfaction and life expectancy within a country, but in their 2012 report they have used the same method as inequality-adjusted HDI with a select number of countries. This is significant because it can change the ranking of a country. For instance, Colombia was ranked third in standard HPI, but once it was adjusted for inequality it moved to seventh.

Even with its limitations it would be a great indicator to be used locally. Experienced well-being, life expectancy and ecological footprint data could be collected and calculated by city or town. It could allow city government's to see how efficiently they are delivering happiness to their citizens and where policy needs to change. Furthermore, I believe at a local level it would be more possible to ascertain the various things that citizens feel would increase their life satisfaction, since HPI still does not provide value to libraries, child care or volunteering. A life satisfaction survey that

included this as well as the components needed to calculate HPI could be very telling for a community and its decision makers.

Global Peace Index (GPI) and United States Peace Index (USPI)

GPI measures how peaceful a nation is, the big limitation is that it is measuring negative peace. It is concentrated on indicators like number of homicides, number of armed personnel per 100,000 people, battlefield deaths and military expenditures as a percentage of GDP. The report also accounts for the economic impact of violence on a country and the world (Global Peace Index 2013: 1-2). In terms of redefining progress, it is hard to imagine that negative peace would be the goal. Beyond only measuring negative peace, it also does not include spillover costs in surrounding countries, indirect costs of terrorism, costs of injuries in armed conflict or social, developmental or environmental costs of conflict (Global Peace Index 2013: 58). In any case, Iceland topped the list as the most peaceful country in the world, recently disbanding their army and having a low crime rate; however, Iceland is a member of the North Atlantic Treaty Organization (NATO), so disbanding their army could be seen as irrelevant because they would still receive protection from this alliance.

Despite its shortcomings, it does provide valuable information that puts things into perspective. In estimating the global impact of violence in 2012, GPI found that the cost of violence was US\$9.46 trillion, which would be enough to pay off the debt of the developing world and then some. Realizing its own limitations, GPI has recently added a Positive Peace Index (PPI) as well. Following Johan Galtung's definition of positive peace, they have created eight Pillars of Peace that are measured to see if a country has

the “institutional capacity and resilience or vulnerability against external shocks” (Global Peace Index 2013: 81). These eight pillars include: “a well-functioning government, a sound business environment, an equitable distribution of resources, acceptance of the rights of others, good relations with neighbors, the free flow of information, high levels of human capital and low levels of corruption” (Global Peace Index 2013: 81).

While this venture into positive peace is admirable there are several weaknesses as well. The most obvious missing component is the environment, which is not valued in any way in this index. Also, the report ties strong economic growth in a country as a factor to positive peace, but I would have to disagree. In some ways it seems like this index allows rich countries to ‘export’ their structural violence to developing countries. Countries like the United States that support their consumption habits from overseas production exploit cheap labor and can often be the cause of corruption in developing countries. It is a large limitation that this index does not have a way of assessing this exportation like the ecological footprint.

This index has also come out with a United States Peace Index (USPI), which measures similar indicators within the United States. Again, this index only measures negative peace for each state and as of yet there is no United States Positive Peace Index. Economically it does reveal some interesting statistics that could come in handy when thinking of policy change. First of all, Maine is rated the most peaceful state in the country, with its neighbors in the New England area, Vermont and New Hampshire at two and three. The cost of violence in Maine is only \$1,281 per capita while in the least peaceful state, Louisiana, it is \$5,011 per capita. Obviously, if Louisiana could become

more peaceful it could use this money towards more useful projects (United States Peace Index 2013: 36-42).

Overall, I think using this index is quite dangerous. There is a story behind these raw statistics that just is not being told and ignoring them is irresponsible. Louisiana is not only still recovering in many ways from Hurricane Katrina in 2005, but it was also deeply affected again economically and in its citizens livelihoods through the recent BP oil spill. Race discrimination could also play a role in incarceration and violence, which is hardly a problem in Maine with a 95% all-white population (U.S. Census Bureau 2012). All these issues that are evident in the United States news outlets are overlooked in these statistics. Even when assessing findings at a metropolitan level, USPI lacked the ability to sense inequalities in peacefulness between different areas and neighborhoods. It is statistics like these that can be used by policymakers or said in the media that give us an incorrect picture of what is really happening. While I could see some value in using the monetary numbers to show the billions we could be saving by working towards peace, I see little value in using GPI, PPI or USPI at the local level as it lacks too many necessary components, like the environment, and hides too many truths, like racism, external factors or a lack of diversity.

Triple Bottom Line (TBL)

Triple Bottom Line (TBL) differs from the previously mentioned alternative indicators in that it does not have formal index as of yet. It is more of an alternative approach for looking at businesses, non-governmental organizations (NGO) and government projects. It was created by John Elkington (1997: 402 pps) in his book

“Cannibals With Forks”. Essentially, “it is an accounting framework that incorporates three dimensions of performance: social, environmental and financial” (Slaper 2011: 4). It can best be visualized in Figure 4.

Figure 4

Triple Bottom Line

Economic	Environmental	Social
Sales, profits, ROI	Air quality	Labor practices
Taxes paid	Water quality	Community Impacts
Monetary flows	Energy usage	Human Rights
Jobs created	Produced waste	Product responsibility
TOTAL	TOTAL	TOTAL

(Savitz 2006: xiii).

The goal of a business, NGO or local government would be to account for all these things and come out with a positive number. If an entity scored high in one category but failed in the other two, then the entity would be deemed unsustainable in the long-run. The biggest limitation is that there is no universal way to calculate TBL, but that does offer the opportunity for this alternative to be more contextual. A local community could weigh components based on their priorities. For example, if a community development project is created to help at-risk teens, the number of high school graduates or employed adults that finished the program could be more heavily weighted than other community impacts. The financial portion would be less contextual because of standard accounting practices, but projects that do not have the goal of making money would obviously look

at the financial portion differently (Slaper 2011: 6).

Some argue that TBL should be turned into an index so that there could be comparison between various entities, while others want all aspects of TBL to be monetized to have a common unit of measurement. While the first could be useful, it would be difficult to make it contextual. The latter would force a dollar value on things like forests, lakes or endangered species. More suitable ideas could be blending it with other indices or using it in conjunction with them (Slaper 2011: 4).

For example, the state of Maryland uses a Genuine Progress Indicator (GPI) and TBL mixed framework to compare various projects, though GPI plays the starring role it still uses principles from TBL. Another example is Grand Rapids, Michigan. They have created fourteen major indicators that will lead them to sustainability ranging from number of Leadership in Energy and Environmental Design (LEED) projects to energy consumption and alternative fuel usage. In this case, they truly follow the TBL approach but in a way that addresses the issues pertinent to its community (Slaper 2011: 7-8).

Several businesses have taken the initiative to develop some type of a TBL report. Surprisingly, Shell Gas Company was one of these companies. Though their motives can be questioned, they did hire on John Elkington to do the report (Livesey 2002: 314). Other companies like 3M and General Electric have also seen cost benefits to making a TBL report by cutting down on waste and becoming more innovative in their industries (Slaper 2011: 6).

An argument could be that these companies still care more about profit than they do the environmental aspects and that the TBL approach is still assuming that a growth

economy is what society needs and wants. As Sharon Livesey, a tenured associate professor at Fordham School of Business eloquently puts it: “Sustainable development seeks to reconcile the goals of economic development and ecological well-being” (Livesey 2002: 315). What if the two cannot be reconciled? What if economic development and growth are not possible if we want and need ecological well-being? While TBL may not be an all-encompassing solution, it is a great starting point. It is an excellent way to get businesses and local governments to start looking at the bottom line differently, and this is what is important. The fact that an entity can tailor it to their concerns is even better, though there should at least be a TBL standard set by local governments or business groups.

Degrowth and Steady-State or No Growth Economics

What if an indicator or index cannot solve the problem? What if we need to rethink the entire economy? The ideas of degrowth and no growth or steady state economics may seem radical, but they deserve a closer look because they may very well be necessary. Thus far, this work has pointed out the various problems with growth and its unsustainability as well as the vicious 4G syndrome that it creates. Now is time to examine the possibilities outside the current system to see if they hold the key to a truer progress and if they could be used in conjunction with alternative indicators.

Degrowth

The idea of degrowth really began to take shape with the work of Nicholas Georgescu-Roegen’s *The Entropy Law and the Economic Process* published in 1971. Georgescu-Roegen commented on “the intriguing ease with which neoclassical

economists left natural resources out of their own representation of the economic process” (Georgescu-Roegen 1971: 2). Then, he further looked at the natural law of entropy and commented how neoclassical economists failed at recognizing the second law of thermodynamics by not accounting for the degradation of matter and energy. The French translation of this book led to movement in France of *décroissance* or degrowth (Heinberg 2011: 249).

Essentially, degrowth is a planned contraction of the economy that has the goal of reaching a steady state economy (Alexander 2012: 69). Today there are many more degrowth thinkers and more people joining this movement, especially in Europe. Degrowth thinking has had such an increase that the first International Degrowth Conference was held in Paris in 2008 (Heinberg 2011: 249). While there has not been much excitement over degrowth in the United States, there has been gains in similar movements like “voluntary simplicity” which is a social movement that is rejecting high consumption levels and trying to find a lower consumption but higher quality of life alternative, the key is that the simplicity is a choice (Alexander 2012: 66). The idea is that if society chooses to live more simply than there would not need to be a drastic and possibly fateful day where it becomes necessary to live more simply. Beyond lower consumption rates people involved in this movement may also reduce or restrain their income and/or working hours (Alexander 2012: 69). This movement is akin to degrowth because the actions of these movements would contract the formal economy in a planned, intentional way.

One leading proponent in the degrowth movement has been Serge Latouche, author of *Farewell to Growth*. He argues that although degrowth proponents are typically viewed as rejecting anthropocentrism and being in support of some type of deep ecology, this does not need to be the case (Latouche 2009: 97). Being ecocentric and anthropocentric are not necessarily mutually exclusive. He speaks of “business schools as schools of economic warfare” (Latouche 2009: 19). For Latouche, the underlying problem in today’s world could be defined as what Stephen Purdey refers to as the growth paradigm. Purdey defines the growth paradigm as the “dominant ordered system by which all major actors comply” (Purdey 2010). This paradigm serves as a type of governance, the globally “common commitment to economic growth” (Purdey 2010).

For Latouche and others, degrowth is the necessary solution. Perhaps a bit overzealous, Latouche often refers to the “concrete utopia of degrowth” (Latouche 2009: 4). This is where I feel he may lose a lot of people because of the inherent stigma associated with attempting to create a utopia, for what could be one person’s utopia could be another’s hell. Others perhaps word it better, like Dominique Belpomme who stated “growth has become humanity’s cancer” (Belpomme as quoted by Latouche 2009: 20). While degrowth may not lead to a concrete utopia, it may become necessary. As previously stated, the goal would still be a steady state economy or no growth society because just as society cannot grow forever nor can it “degrow” forever either.

Steady-State or No Growth Economics

“A failed growth economy and a steady-state economy are not the same thing; they are very different alternatives we face” (Daly 2008: 1). Herman Daly is the main

proponent of a steady-state economy (SSE) or no growth economy as well as one of the original creators of what we now know as Genuine Progress Indicator (GPI). He sees the failures of a growth system and would be considered one of a growing number of ecological economists. The distinction he makes above is significant because it shows the intention in a steady-state economy versus the inevitable collapse that could result in a no growth economy in the future. He explains a steady-state economy as a system that focuses on qualitative development but not quantitative growth (Daly 2008: 1). A steady-state should also not be confused with a stagnate-state.

He argues that the earth is pretty much in a steady-state, and it should not be confused with thinking that the earth is static, rather that several qualitative changes have occurred on earth over the years. Accordingly, our economy should reflect the steady-state that we live in and should have a sustainable flow of throughput with a population and capital stock able to adjust to a size can be maintained by the constant throughput (Daly 2008: 1-2).

More than other thinkers, he offers a clear path to achieve a steady-state economy, though it would force the United States and other developed countries to shift current paradigms completely. In production, a nation would become more focused on repair and maintenance than on continually producing something new. Innovation and technology would not have to stagnate in a steady-state economy, rather they could flourish to make qualitative improvements in the production process. One excellent example he provides is as follows:

A population of 1000 cars that last 10 years requires new production of 100 cars per year. If more durable cars are made to last 20 years then we need new

production of only 50 cars per year. To see the latter as an improvement requires a change in perspective from emphasizing production as benefit to emphasizing production as a cost of maintenance. Consider that if we can maintain 1000 cars and the transportation services thereof by replacing only 50 cars per year rather than 100 we are surely better off—the same capital stock yielding the same service with half the throughput (Daly 2008: 6).

Thus, we would be creating better and more durable products versus just producing more products. Many of us already realize this in our frustration as a consumer when it is often cheaper to simply discard a broken product and buy a new one than it is to fix the old one. In the past, things were made more durable whereas now we often notice that technological quality is often going down despite technological advances in recent years, this probably being because of the growth paradigm that our society adheres to. In a current growth system if a car lasts 20 years, that only means that you will sell less cars so there is no incentive for durability in this regard. Of course no one will buy a junk car in a growth or steady-state economy, but incentive for technological quality should not only be that you sell more cars, but perhaps it could through more leisure instead of more production. This could also be realized if used in conjunction with a new tax system.

Daly is an advocate of considering the environment, or rather the loss of natural capital stocks, into our tax system. He proposes different rounds of tax changes, beginning first with forgoing a \$x revenue from the worst part of our income tax but offsetting this loss of revenue by collecting the same \$x revenue from our best severance tax (tax at the severance from the ground like a well-head or mine mouth), and then continuing down the line. Essentially he advocates a “tax bads, not goods” (Daly 2008: 8) mentality with taxes. If we tax more what we want less, then we could begin to stop taxing what we want more of. On top of that, the additional costs to big polluters would

raise resource prices and spur further efficiency in resource use (Daly 2008: 8).

In an SSE it would also be important to move away from a fractional reserve banking system and towards a 100% reserve requirement, which would help stabilize the economy and help eliminate what appears to be a large Ponzi-scheme (Daly 2008: 9). Although, with Daly's SSE there are some limitations. Free trade, as we know it today, would not be possible unless it was between two nations with the same commitment to sustainability in their cost accounting. Some sort of "compensation" tariffs would need to be placed on goods that would give a foreign entity, concentrated on growth and not sustainability, an unfair advantage (Daly 2008: 4-5).

The ideas from steady state economics were built from Daly's earlier work with John Cobb in *For the Common Good* where they point out that "further growth beyond the present scale is overwhelmingly likely to increase costs more rapidly than it increases benefits, thus ushering into a new era of "uneconomic growth" that impoverishes rather than enriches" (Daly 1989: 2). With concrete plans, indicators and policy change, the pressures from a growth economy could be lifted and we could usher in a new era of a reconceptualized version of progress.

Reconceptualizing Progress

GDP was created as a way to measure production and it did this very well after World War II when the United States was a production country. Now, our economy could hardly be categorized as a production country because we have shipped most of our production overseas. On top of that, GDP is not measuring what is important and is

measuring a lot that is not. The time is now to replace GDP as a way of measuring a nation's progress. The traditional economic growth model in an open marketplace is the key economic insecurity that plagues the United States and it is important to move forward with new ways of evaluating progress. Considering the vast amount of what could be measured makes it more evident that a new path must be paved.

Looking at the various alternative to GDP indicators of progress, the path becomes more visible, especially when trying to tackle the problem at the local level. The HDI as it currently stands is not contextual enough to be used effectively in potential community projects or policy changes, but it can give some insight into revealing the level of inequality within a country when using the inequality-adjusted HDI. HDI is a step forward in measuring progress internationally, but lacks a more local aspect.

Global Peace Index (GPI2 in this section) is not a viable avenue for measuring the true progress of a nation in terms of peaceability or otherwise. Unless the index accounts for the "exportation" of structural violence through exploitation and manipulation abroad, it cannot adequately represent a country's level of negative peace or positive peace. It does account for wars abroad, but this is hardly covering the violence a developed country may cause.

GNH is a very subjective indicator that could immediately lose credibility scientifically as an indicator, but if changed to Gross Local Happiness (GLH), it could be applied to evaluate the effectiveness of current policy or identify current problems. If a successful index is created after the model used in Bhutan in recent years it could prove useful, but it would run into the same limitations as Bhutan, such as survey duration.

GPI appears to be one of the most promising of alternative indicators, especially at a local level. It could have several policy implications if it were implemented. For example, a development proposal on the mayor's desk for a resource intensive production facility that would require deforestation in the area may actually create an overall negative effect on the city, while an urban farming collective's proposal may suddenly seem more beneficial. Moving beyond the economic growth paradigm and adding value to the informal economy is the key. Thinking back to the example of the urban farming collective, even monetarily it could end up saving the city by potentially lowering crime rate, putting more value in volunteer work and adding natural capital, all of which are measures in the GPI.

HPI is another promising reconceptualization of progress. The brilliant simplicity of the index and legibility of its results could make it a dominant indicator of progress. Shifting people's thinking that efficiency of delivering happiness should be a nation's main goal could actually prove easier than it appears as most people already hope that their nation's policies make them happy albeit through chasing economic growth. The use of ecological footprint in its computation is a real strength because it accounts for the "exportation" of pollution by developed countries while still taking into account life satisfaction and life expectancy. While I love its name, I do worry that it could be its biggest limitation. Getting policymakers and the general population to take an index named Happy Planet seriously could prove difficult. Perhaps something like Sustainable Satisfaction Index could gain more traction. Nevertheless, it is a great indicator that I believe could be adapted to the local level and used in conjunction with GPI to reconceptualize progress through alternative indicators.

Identifying weaknesses in the current system and using alternative measurements of progress will do no good if not used for community development programs and policy reformation. Beyond this, a new conceptualization of progress must grow from the grassroots level. If the United States takes a hard look at itself it will realize that what “worked” in the past cannot exist in a world at biosystem capacity and amidst peak oil. How we look at economics and progress needs to change drastically.

Economics must begin accounting for environmental degradation in standard bottom line assessments, and businesses and individual projects should be held accountable and expected to adopt a TBL approach to accounting, especially if they are to receive government money. The idea of Herman Daly to tax more what we want less of so that we can eventually stop taxing what we want more of is inherent in how we should be viewing progress (Daly 2008: 8). We should be placing more value on those things that provide sustainable life satisfaction and less value on those that do not.

So how do we begin to take the tethers of economic growth away from the idea of progress? We begin small. People need to look inwards and determine what they want out of life, the likely answers will be love, happiness and health (Marks 2010). If progress has become synonymous with economic growth, it becomes odd that it is not at the top of our life goals. Nothing societal can change without changing within individuals first. As Thorstein Veblen, a prominent American economist and sociologist stated in 1899:

Social structure changes, develops, adapts itself to an altered situation, only through a change in the habits of thought of the several classes of the community...or through a change in the habits of thought of the individuals which make up the community. The evolution of society is substantially

a process of mental adaptation on the part of individuals under stress of circumstances, which will no longer tolerate habits of thought formed under and conforming to a different set of circumstances in the past (Veblen as quoted by Czech 2000: 107).

We need to recognize that today the circumstances are different than they were fifty years ago. Growth had its time in the United States, but it can no longer be seen as progress. Progress needs to be viewed today more like the steady-state economy, a sustainable qualitative improvement rather than a quantitative enlargement.

This progress cannot be measured by GDP, so we must utilize alternative indicators, but more than that it must first be measured locally and shape local policy. Using HPI and GPI in conjunction, we can accurately assess the true progress of our communities. Also, communities must make their own indicators, though perhaps have a standard weighting system across a set number of indicators for comparability purposes. For example, preserving the Lake Erie may be important in Ohio while protecting the crocodile population may be of importance in Florida.

In addition, our businesses and development projects we must encourage a TBL approach. This transition could be incentivized either through tax breaks for sustainable bottom lines. Perhaps a way to utilize triple bottom line individually could also be considered. After TBL becomes more commonplace, then requirements on businesses to provide a TBL report should be put in place. In this way, we can tax the bad and reward the good. This will also keep the government in a steady-state economically as lost revenue in sustainable businesses will be offset by polluters. If the point comes when all businesses are sustainable, then financial incentives will become unnecessary.

It is important that the use of HPI and GPI should not be used to create competitiveness between cities, but instead for each community to help them evaluate where they are at and how policy change could help. Progress need not be competitive, though comparing cities could provide useful insight into various activities and policies that some cities are implementing, which could help cities with lower HPI and GPI scores.

Conclusion

Growth is over. We need to make the intentional choice to move towards a steady-state economy before we are forced to make that change. This could involve some form of degrowth in the initial phases, but would ultimately find its equilibrium in the steady-state. Without growth hanging over us, GDP can no longer be used as a measurement of progress because of its several insufficiencies in what it measures and its inability to capture what is important in a new “post-growth” paradigm.

In terms of evaluating progress, the best course of action would be to begin reflecting individually about what we want out of life, inevitably finding that economic growth is not it. Then, we must use alternative indicators at a local level to measure our community’s progress, using a reconceptualized view of progress. This progress is a sustainable qualitative improvement. Measurement of the “new” progress can be made by using both HPI and GPI together. Each community must come up with their own indicators, but maintain some kind of standard for comparability.

Businesses and individuals should adopt TBL approaches and could be incentivized to initiate this transition. Local communities and individuals must change their habits of

thought for change to occur. While HPI, GPI and TBL each have their own limitations, when used together they provide an accurate depiction of progress.

Chapter 3: Rural Sustainability Activities

I suggest that the foundations of peace cannot be laid by universal prosperity, in the modern sense, because such prosperity, if attainable at all, is attainable only by cultivating such drives of human nature as greed and envy, which destroy intelligence, happiness, serenity, and thereby the peacefulness of man (Schumacher 1973: 19).

Now that there is a reconceptualization of progress as sustainable qualitative improvement, it is time to look at the progress many people, communities and organizations have made around the world. Outside of ruling economic thought and indexes, real people are making their own moves towards sustainability and peaceability. These movements are happening in rural towns, big cities and households. This chapter will focus on rural sustainability movements by looking at three eco-village intentional communities as well as other rural sustainability activities that I feel have transferability to an urban setting. Throughout I will include how policy affects or has been affected by these movements. In order to learn from them they must be examined and evaluated to determine strengths and weaknesses. I will also theorize a 4G Solution to the previously stated 4G Syndrome and look at how these various movements are changing the cycle of structural violence to create positive peace.

Eco-villages

Eco-villages, have been growing in number in recent years, there are now an estimated 1500 eco-villages worldwide. In the midst of urbanization and urban sprawl, people are choosing a radically different lifestyle than the high-consumption lifestyles of their peers. Robert Gilman, a leading thinker in sustainability, defines an eco-village as:

A human scale, full-featured settlement in which human activities are harmlessly integrated into the natural world in a way that is supportive of healthy human development and can be successfully continued into the indefinite future (Gilman 1991: 10).

By human scale, it is meant that every person can be known in the community and they can feel they could influence the community's future and by full-featured, they must contain most of the services needed for everyday life (Gilman 1991: 10).

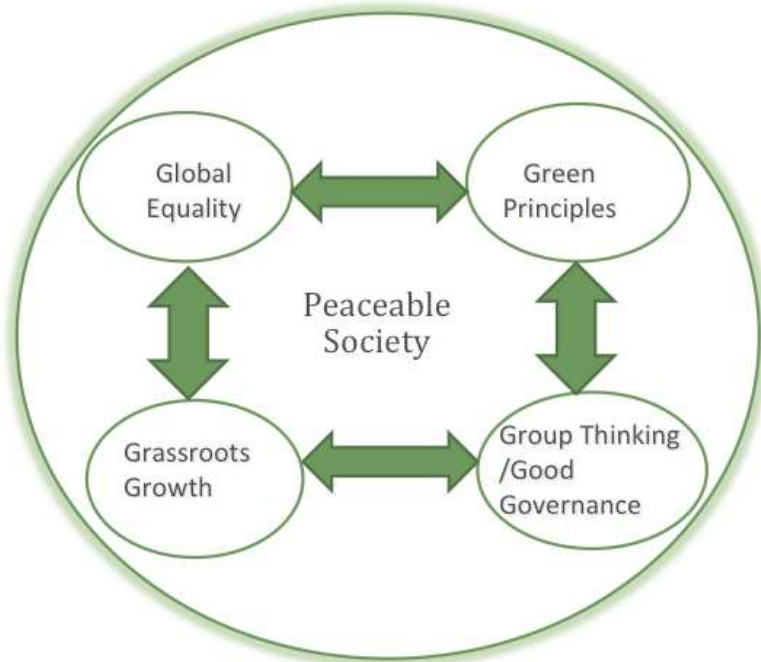
At the moment, eco-villages remain for the most part rural and small, but this is a choice. In order to be more in harmony with nature, rural settings tend to become a necessity. Also, in order to stay human-scale it has been argued that a community cannot be larger than 500 or at most 1,000 (Gilman 1991: 10). Their power to transform lies in their smallness. In smallness they can provide better governance, a scalable economy and peaceable as well as sustainable practices. It is my belief that intentional communities, like eco-villages, not only unveil how to make a peaceable and sustainable society, but they also offer a 4G Solution to the previously discussed 4G Syndrome.

Finding a way out of the 4G Syndrome can be done through an examination of its antithesis. Looking at each of the four Gs separately we can begin to construct an opposing model. If economic growth is a trigger that starts this process, then its opposite, de-growth or changing the conception of growth or progress could begin a new cycle. Glut in the marketplace would then be sustainability or limiting consumption. Greed would be replaced with equality or generosity, and grievance would become dialogue. These various opposites resemble the Equality, Sustainability and Peaceability (ESP) model introduced by Gomes, which is an AlterNative Social Ecology (Gomes 2012: 1061-1062). In his analysis he looked at his field research with the Orang Asli village,

while I will look upon creating my own alternative social ecology model by looking at the principles and qualities at of intentional communities.

Building upon the antithesis of the different components of the 4G Syndrome model we can synthesize a new model: the 4G Solution (defined as Global Equality, Green Principles, Group Thinking/Good Governance and Grassroots Growth) (See Figure 2). I contend that these four components have the ability to transform the original 4G Syndrome into a cycle that creates and perpetuates a peaceable society. I also believe that an examination of these components within various intentional communities will reveal what makes a society peaceable.

Figure 5: 4G Solution



Findhorn Eco-village, Findhorn, Scotland

Findhorn has been around since the 1960s, when it started as an intentional community in caravans (Dawson 2004: 33). Though it really began in 1982 to make greater strides in making their settlements sustainable environmentally, economically and socially. Today they boast about 450 residents and an ecological footprint that is more than 40 percent smaller than the rest of the United Kingdom (Sevier 2008: 37-38). With an ecological footprint of 2.71 g ha, they have the lowest ecological footprint in the developed world, though not quite reaching the HPI goal of 1.7 g ha (Dawson 2007: 50). With all their strengths, they still very much have ties with the global industrialized world for building materials, computers, clothes, air travel, etc. (Dawson 2006: 57). Breaking down some of this dependence would most likely put their ecological footprint well within the sustainable rate of 1.7. On the plus side, 70 percent of their fresh food is supplied through their own community-supported agriculture (CSA) program (Sevier 2008: 37-38).

For all the obstacles inherent in starting an eco-village in this globalized world, Findhorn stands firmly in the belief that continual improvement towards further sustainability is key. They serve as a great example among intentional communities of what is possible. For now, using the 4G Solution will reveal exactly what makes Findhorn a model for a peaceable society amongst the industrialized world.

Global Equality

At the Findhorn Eco-village all community members are viewed as equal; men and women both participate in community services and activities, several local

businesses are cooperatives and anyone can be a part of the decision-making process. One good example of equality in the village is the Ekopia Resource Exchange, which is similar to a community bank. This organization within Findhorn offers the financing for new projects that have both an ecological and economic aim. All members of the community are invited to join and regardless of their deposits into the “bank” every member gets one equal vote when Ekopia is deciding which projects to move forward with (Findhorn 2013). The local bank is described by Jonathan Dawson, president of the Global Ecovillage Network, as a “virtuous circle where everyone wins” (Dawson 2004: 34). For investors, they gain higher rates of return and receive ownership in local businesses. Businesses and people get loans at lower rates than traditional banks. Then, the expansion of local businesses creates more jobs and purchasing power in the community. Perhaps the largest win comes in the more difficult to measure feeling of satisfaction from ownership and participation by community members towards their economy (Dawson 2004: 34). I believe that if HPI were calculated for Findhorn, it would find that the happy life years at Findhorn far exceed numbers in other places.

Equality also extends to the global community for the Findhorn community. This can be seen in their sliding scale payment system for their training courses to the fair trade products that are stocked in their local businesses. They also have a project working with indigenous Bolivians in the areas of human rights and social ecology. They offer some assistance in some of Findhorn’s transferrable ideas while reinforcing the local knowledge by emphasizing the importance of their interconnectedness to nature. They have also helped them to create an Eco-village Institute where different communities can share ideas and offer support (Findhorn 2013).

While the housing situation differs among different members, the community takes part in helping others build their zero carbon homes. Also, in an attempt to be more inclusive to people that want to join the community without ample financial resources, Ekopia is currently securing plans to incorporate co-housing and affordable housing into the village (Findhorn 2013). Though currently, one of their weaknesses lies in their lack of access to lower income families.

Green Principles

Green principles would be values that are eco-conscious and sustainable. Some of these values would fall into Deep Ecology at Findhorn, which I do not embrace fully or find it to be completely transferrable, but nevertheless it works for Findhorn in the creation of a peaceful society. As Merchant (1994:8) indicates, “Fundamental to the deep ecological approach is the need to overcome the narrow anthropocentrism dominant in Western culture”. Many have argued, including Merchant, that deep ecology ignores the current systems of domination, namely capitalism and the political economy, in regards to domination over nature and other human beings (Merchant 1994: 8). This is why I believe that Deep Ecology can be practiced successfully to create peace, but only in conjunction with other epistemologies and I feel that Findhorn does this sufficiently.

Overall, green principles underline all aspects of life at Findhorn. From their low ecological footprint to being designated by UNITAR (United Nations Institute for Training and Research) as a sustainability training center for local government officials and elected representatives, Findhorn is ahead of the curve in green principles (Findhorn 2013).

Furthermore, they achieve this through several initiatives from their spiritual connection to nature to how they treat their wastewater. First, their energy sources are renewable. Individual houses use passive solar and the community shares four wind turbines. They are actually a net exporter of energy. They also have a unique way of treating their wastewater, which they call the “Living Machine”. This system uses plants, algae and small fish to breakdown waste material from the water naturally without any chemicals, at this point the water is safe to enter back into waterways or to water their communal gardens (Findhorn 2013).

Findhorn was started with a garden and this has grown to be an integral part of its local economy. Food produced in these gardens is completely organic and then enters their local economy through the Phoenix Community stores, which are owned cooperatively by hundreds of members of the community. Beyond gardening, these stores supply other local goods, such as cheese, handicrafts and even organic whisky. The short distribution channels further reduce their ecological footprint (Findhorn 2013).

Perhaps their most impressive green principles can be seen in their buildings. Currently, Findhorn has sixty-one ecological buildings, which not only run on solar and wind, but also incorporate recycled materials. There are some more pronounced recycled housing options, such as their old whisky barrel homes, but all homes use an insulation made of recycled paper and are equipped to collect and recycle rainwater. When unable to use recycled materials in construction, they use local timber that is harvested from managed forests and organic paints and wood preservatives. To further manage unnecessary consumption there are communal laundry, kitchen and lounge areas. Over

the years, Findhorn has been innovative in ecological building designs and offers training to others in this area (Findhorn 2013).

Their green principles have guided them over the years and may be the aspect of Findhorn that outwardly appears the most transferrable, but it is my belief that green principles alone cannot lead to a peaceful society or a sustainable one. If tomorrow all homes were made to be ecological, all food organic and all energy renewable it would still not address existing inequalities and disempowerment of local people. This is why the 4G Solution has many components, because each flows into the next. By starting with global equality we can see the flow into more green principles because everyone has access to resources and becomes a stakeholder in their environment. Equality and green principles would then flow into more group thinking or good governance.

Group Thinking/ Good Governance

It is perhaps most important to eliminate greed from the 4G Syndrome because it acts as a cancer that infects the whole. The most probable way to overcome this would be through group thinking and good governance. This is not an elimination of the self, but rather taking the extra time to consider the impacts of a decision on the community, the environment and the world. Findhorn does this through governing with Deep Democracy. “Deep Democracy asserts that real wisdom lies in the unconscious of a group and through a facilitated process answers can be uncovered and interventions initiated where the group can begin resolving and healing their own issues” (Lewis 2013:1). This meaning that a simple majority in decision-making is insufficient.

At Findhorn they have an elected Management Team of eleven that regularly meets with a Council of about 40 loyal community members in order to make decisions, which affect the whole community. Meditation takes place before votes for further self-reflection on the impacts of the decision. The goal is to have a unanimous vote or at least a ninety percent majority with a loyal minority, meaning that the minority will still support the project. If this does not happen, then no decision will be made and further information or meditation will take place before the decision is voted on again (Findhorn 2013). This allows for the uncovering of all information from all sources that may be marginalized during a simple majority vote. Deep democracy recognizes the importance of all voices, even a small minority.

“If people are passionate about their view and have lost the vote they will tend to initially feel hurt, rejected, disowned and disconnected from the majority” (Lewis 2013: 1). Myrna Lewis, the co-founder of the Lewis Method of Deep Democracy, argues that these passionate people will in turn begin to subtly undermine the majority decisions, which in turn could lead to more blatant rejection or violence because they feel that their voice is lost (Lewis 2013: 1-2). This is evident when looking at a polarized political climate, like the United States where a slim majority makes the decisions, thus disenfranchising a large minority. I do believe that Deep Democracy would be difficult at a national level, but I feel that in making a peaceable society at a local level it can prove useful in eliminating grievances.

Grassroots Growth

I have placed growth in a different location in the 4G Solution than in the 4G Syndrome purposefully because I feel that growth itself is not inherently bad, especially if it is more the result than the cause of a continuous cycle. Growth is not the aim of Findhorn, but through its ideals of global equality, green principles and group thinking/ good governance it has grown at a grassroots level as surrounding communities and visitors from around the world can see its benefits. Findhorn resonates more as a growing movement of intentional communities around the world that are focusing on the growth of local production and services, not necessarily for monetary reasons, but for a higher level of sustainability, autonomy and sense of community.

Findhorn is in fact a part of the global economy through their fair trade products and the outside money received from their training courses, but each year these monetary contributions add to sustainability projects at Findhorn and beyond. One good example of their grassroots growth is through the establishment of Ekopia and their local currency the Eko. The Eko was started after a growth of their local businesses as a way to keep the money in the community and it now has a circulation of 20,000 Ekos, which is equivalent to 20,000 English pounds (Findhorn 2013).

They have also grown in terms of autonomy by starting their own schools that have come to include children from the surrounding communities and teach the principles emulated by Findhorn. Their global network of education has also expanded to over 14,000 visitors per year (Sevier 2008: 38). In short, growth is not inherently bad so long as it is “a shift from an anthropocentric to an eco-centric perception of nature, from hyper-individualism to a community-focused responsibility” (Gomes 2012: 1071).

A Peaceable Society

While Findhorn does have its weaknesses and conflicts within the community, this does not prevent it from being a peaceable society, in fact it may strengthen its peaceability. In my discomfort with Latouche's use of the word "utopia", Findhorn does not claim to be this rather they become stronger in their peaceability through conflict transformation using deep democracy, educational training and continual sustainable improvement as their mottos.

Cobb Hill Co-Housing, Hartland, Vermont

Cobb Hill Co-housing is located in rural Vermont and was founded by Donella Meadows, the lead author of the seminal book in 1972 the *Limits to Growth*. Unfortunately, she died suddenly only six months after Cobb Hill broke ground, but more than a decade later her vision can be seen throughout the development. It is a smaller eco-village, having only 60 members and 22 eco-friendly homes, though it is amazing what this small community has accomplished (Cobb Hill 2013).

Being a rather new eco-village, Cobb Hill would not be a likely choice to include here, but there are several reasons why I think that Cobb Hill is suitable to this research. First, its founder seemed extremely relevant, as the work *Limits to Growth* was the first book to use computer models and really bring to light the inherent problems with infinite economic growth on a finite planet (Meadows 1972). The idea of seeing its lead author practice what she preaches was of interest to me. On top of this, she had created the Sustainability Institute, now known as the Donella Meadows Institute, which was more of a "think-do tank" and Cobb Hill was the living example of its mission (Pasanen 2011:

2). As well, it interested me that it was not a vegetarian community but rather a sustainable meat-eating community, which I feel could have more transferability to urban settings. More than any reason, through my research it seemed most like the type of eco-village where I would want to live.

Because it is only a decade old, it is more difficult to decide if it has completely entered into the 4G Solution cycle of a peaceable society, but they are well on their way. They do not have a local currency and members admit to some mistakes in sustainability, but it serves as a great example for newer eco-villages on their way to the 4G Solution.

Global Equality

Cobb Hill recognizes that it is not perfect and that it has a long way to achieve its goals, but within the community all residents are viewed as equal. As well, outlined in their principles, they welcome everyone equally regardless of race, gender or class; however, becoming a member and buying a house there costs at least \$150,000 up to the high \$300,000s, thus preventing a lot of lower-income individuals from being able to move there. They are attempting to correct this inequality by having four of the houses partially subsidized by a community fund, but there still exists a price barrier for most to move to Cobb Hill (Pasanen 2011: 5).

Because of their barriers of being in a high-priced real estate area, they try to bridge the gap between rich and poor in other ways, by donating food to twenty local low-income senior households and a local family homeless shelter. They are also utilizing the Donella Meadows Institute to teach school children and have sustainability education outreach for adults (Cobb Hill 2013). They have room for improvement in the aspect of

global equality, but this could be remedied through creating a lower entry cost to low-income individuals or in adding sustainability training specifically to disadvantaged people.

Green Principles

In our current social context, how and where you procure your food is both a political act and a gesture of the spirit. A large measure of our hope for transforming our culture depends on beginning at the base by creating a renewed and truly healthy agri-culture (Stephen Leslie, Cobb Hill resident 2012).

In terms of the 4G Solution, this is where Cobb Hill has made the most progress, which is not surprising because its founder was an environmental scientist who had the foresight to see where economic growth was leading. For heat and hot water they are using a local renewable energy source, wood; however, they note that though it is more sustainable it is time-consuming because it must be hand-fed every hour by a community member (Pasanen 2011: 3). Their CSA provides one hundred shares, and they also supply two restaurants and a food co-operative with the bounty of their farm, but more impressive is that all their farm products are sold within a twelve-mile radius, which significantly cuts down their ecological footprint (Leslie 2012).

Another interesting green principle that is not seen at Findhorn is their use of Fjord horses for farm work instead of tractors. They have even figured out that the cost-savings of using horses is over \$4,000 annually. They bask in the slowness of using the horse, because they feel that it gives them time to take in the beauty of their work (Leslie 2012). Beyond horses, they exceed in animal husbandry better than most eco-villages to truly make a sustainable farm. They use the dairy cow and horse manure to feed the soil.

Their cows also produce milk for their cheese making enterprise. They have sheep, llamas and goat as well, which also symbiotically fit into their enterprises (Pasanen 2011: 2-5). The use of animals is integral in permaculture design, a sustainable gardening practice, yet it is often under employed in many eco-villages because they lead vegetarian lifestyles, but I find this a major strength of Cobb Hill as it increases the likelihood of its practices being adopted to by others.

Their houses share similar qualities as Findhorn, utilizing a south orientation and solar panels, but they also have composting toilets in every house, while Findhorn still had some old on their grounds without any sustainability features (Flagg 2012). While sustainable building techniques using solar and energy efficient appliances may be the most transferrable to an urban population, they would somewhat miss the spiritual aspect of what living through and through with these green principles means for the soul, especially if they are not paired with a sense of community and group thinking.

Group Thinking/ Good Governance

Without the fame, size or banking system of Findhorn, Cobb Hill does not need to engage in an extensive organizational system or deep democracy to make most decisions. Their by-laws include being able to call a vote for major decisions, but it has never been used because they have been able to deal with all decision-making peacefully with various committees. All members are encouraged and open to join whatever committees they are interested in (Flagg 2012). They maintain monthly meetings to discuss community chores, but even at these meetings there is no leader, but rather a volunteer facilitator (Cobb Hill 2013).

Everything is not perfect at Cobb Hill, being a smaller community they are much more like a family with normal disagreements and squabbles, but they do have an interdependence with each other that is lost in larger communities. A great example of their teamwork is with their wood heating system. Someone must feed the boiler once an hour, so others in the community are dependent on each other to keep schedules or freeze. Their biggest weakness in group thinking is that they do not have any co-operatively owned enterprises on site. The few businesses are privately owned and though they have some interconnectedness they lack the sense of community ownership that is present in many eco-villages with a co-operative business. I think this would also help them to be more equitable because more people could afford to own a share of a business rather than open an entire enterprise on their own. It should be noted that they do encourage residents to open new businesses on the land and will offer them free rent (Flagg 2012).

Grassroots Growth

Cobb Hill received a conservation easement so that more housing developments cannot be built on the property, this inhibits their immediate community from growing anymore but protects it for the future; however their impact on the surrounding local community has and can continue to grow into the future. With their school partnerships there will be true grassroots growth as those children grow up with concern and appreciation for their environment. With their founder writing Limits to Growth, the intention at Cobb Hill was never to grow, but only share knowledge, so that the ideas can grow sustainably over time (Cobb Hill 2013) (Pasanen 2011: 1).

A Peaceable Society

Cobb Hill is a work in progress. They pride themselves in the entrepreneurial spirit of their members, but they lack a truly co-operative work environment. I am sure their HPI scores would be higher than average, but they may not be quite at the level of Findhorn, and I think a higher ownership rate in the community would help raise their Happy Life Years. Their lack of creating a separate entity that manages the community could work against them if they make too many partnerships and overextend themselves, but at their size it would appear that committees seem sufficient for good governance. It is revealing that size really does matter in terms of how you can think as a group and make decisions. Cobb Hill would benefit from trying to issue a local currency if they could collaborate with other local businesses. All in all, they have the components to begin a cycle of positive peace, albeit with some “family” conflicts.

Lost Valley Education Center/ Meadowsong Eco-village, Dexter, Oregon

It is real. It is not a classroom. Do you want to know how to exist at the crossroads of ecology, community, economy, and spirituality? Then, jump right in. It's not for everybody, but it is a unique opportunity (Justin Michelson, Executive Director of Lost Valley: 2013).

It was founded in 1989 when the land and buildings were bought from a Christian youth camp. Known simply as Lost Valley around the community and surrounding areas, I had no idea what to expect. My parents thought I was moving to a commune and I was unsure my research fully prepared me to embrace the community life, which I insisted did not translate to a commune. Suddenly, every hippie stereotype crossed my mind in the days leading up to my month-long stay at Lost Valley, but I remained excited. Coincidentally, the Dalai Lama was speaking in the nearby city on the same day

I was to arrive at the eco-village. His Holiness spoke of sustainable living and creating more spaces of peace, I was ready for Lost Valley. It was the culmination of my research into sustainable living and as such I had taken my first sustainable step by organizing a ride with some Lost Valley residents that were also in attendance at the event.

Dan and Andrea picked me up in a late 1960s model Mercedes, and for a split second I let the hippie stereotype float in, but it quickly faded with their friendly smiles and good conversation on the ride to Lost Valley. They had moved there with their two children about a year ago, so that their children would be able to experience nature and living in a community setting. When we arrived Dan gave me a tour of the grounds and introduced me to residents we met along the way. Since it was a Friday, not many residents were around because Lost Valley operates on a four-day workweek for the most part, so I took the opportunity to get settled into my dormitory and get pleasantly lost around the grounds.

When the meal bell chimed, I strolled into the lodge for my first in a month-long of all vegetarian meals. To my surprise, everyone was holding hands but welcomed me into the circle. We all closed our eyes and took a moment to thank the universe and nature for all it had given us and for the steady rainfall that was helping the crops, then a moment of silence. It occurred to me that this was the embodiment of the closer connection to nature that I had been reading about in eco-village living. After gobbling down two slices of lavender amaranth quiche made from the community's farm fresh eggs and ingredients, I was ready to begin my internship.

Simon, our internship coordinator, amazed me everyday with his knowledge of sustainable building, permaculture, and plant names. I continually had to apologize to him for being the ignorant city girl, but he never lost his patience. The month was laid out for us, we would be repairing a passive solar heated shower, come up with a greywater design for the community, work on cob plastering to repair the sauna, and learn permaculture design with Justin, the garden manager and executive director of Lost Valley.

If this reads as a narrative rather than an academic paper it is because at Lost Valley I learned that is exactly what an eco-village is, a narrative. It is not something that can be purely objectively studied without experiencing the intangible narrative and spirit that holds a community and an idea together. It can be categorized into a theory, broken down into various components, but doing so is automatically a limitation because the theoretical rarely captures all that lies in the practical. Though practices are similar at several, an eco-village cannot be replicated because the people would make it different, the narrative would be different. I will attempt to break Lost Valley down into my theoretical 4G Solution, but keep in mind this inherent limitation.

At the time of my internship there were 55 residents ranging from infants to grandmothers, though most of the residents are in their 20s and 30s. Everyone had their own story of how they came to live at Lost Valley. Their personalities in many ways could not be more different, but they all had the same goals: to reconnect themselves with nature, to live sustainably, and create a diverse and welcoming community.

It was evident soon after I arrived that the main weakness of Lost Valley is its financial situation, though at the same time it is one of their greatest strengths. I had two reasons for choosing Lost Valley: the internship program was a mix of many sustainability techniques and the price. After thorough research, Lost Valley was a fraction of the price that other eco-villages charged for a month-long stay. For example, Findhorn is over \$700 a week for the lowest income in the sliding scale and Ithaca Eco-village in New York is \$50 a day with no learning program (Findhorn 2013)(Eco-Village at Ithaca 2013). Lost Valley was only \$400 for the month and included my meals, accommodation and the program (Lost Valley 2013). They want to spread these ideas and they do not want price to be a barrier, but sometimes it seemed they were selling themselves short. On top of that, there were no community sign up fees, residents rented their cabins or apartments for very reasonable rates and often with no lease, community dues would be waived in exchange for community work hours, and meal plans were optional and exceptionally priced. Needless to say, Lost Valley is just scraping by and has a somewhat transient community.

Without the cost barriers of lot of other eco-villages, Lost Valley is more accessible to lower-income individuals, but without any barriers there is no sense of ownership or commitment to the community. It is a double-edged sword, they are more open than other eco-villages, but they lack the cohesiveness that other communities get when people have to “buy-in”. There was one resident that has maintained a cabin for fifteen years, but he was rarely there. Another had been there off and on for about eight years, and the longest continuous resident was the executive director, Justin, at three years. Everyone did seem committed to making the community work, but financially nothing

ties them to the community. Running through the aspects of the 4G Solution for Lost Valley will prove useful in determining what aspects of their community are making it progress more and creating a peaceable society in the United States.

Global Equality

It is my determination that Lost Valley far exceeds other eco-villages in terms of global equality. They focus on educational programs in sustainability and welcome everyone. It is my belief that if someone showed up penniless but willing to work hard, Lost Valley would find a way to incorporate them in the community. In the span of a month, we had a free nonviolent communication workshop, played empathy poker, had guests from other eco-villages and hosted twenty men and women from Tajikistan whom we danced and played music with. There are residents practicing Sikhism, Buddhism and Christianity. Some residents are meat-eaters others vegan or vegetarian and still others are fruitarian. None of these differences resulted in different treatment by the community.

Everyone did seem to be pretty cash-strapped, but this may have served as a unifying factor in the community, though it did cause some stress for the various directors. Although, residents are all encouraged to open businesses on the land, and at the time of my visit there was a beekeeping operation, a used electronic resale workshop that shipped all over the country, the CSA and farmer's market on the weekend, and a gift shop was underway. The community's largest business is its educational and event site, which hosts various groups that can use the space to participate in Lost Valley

workshops or create their own agenda. The businesses are not cooperatively owned by the community, instead they were privately run by individuals. The farm seemed somewhat cooperatively owned because everyone seemed to benefit from its harvest through the cheap meal plan, but only the garden manager and assistant manager (along with interns) seemed to put any work into it. Perhaps if Lost Valley could create more of a sense of ownership through their homes and businesses, then they would feel more of a sense of commitment to the community. Everyone being equally broke and non-committal is not sustainable nor in the long run will it increase the peaceability of the community.

Green Principles

While there were several benefits to already having a community lodge and kitchen, classrooms, cabins, and dormitories onsite from the previous owners there have been a lot of headaches as well because sustainable building was not on the previous owner's agenda. "Greening" the site has been a slow process, but each year brings about more sustainability. On a tight budget they have managed to be more creative and clever with their sustainability. I viewed Lost Valley everyday as a sustainability think tank.

The library and one dormitory have been transformed by natural building renovations. The work was done by one of the leading natural builders in the Northwest and her apprentice. Lost Valley has been fortunate to be able to get her to work for them between her various projects in exchange for a cabin and food. Both buildings now have natural mud floors, whose beauty and elegance is beyond what most would expect. Walls and insulation are updated with cob, a mixture of mud, clay, and silt. Community

bathrooms are equipped with low-pressure flushing toilets and some units operate with composting toilets, though there are plans to install more in the future.

They have even gone beyond functional in sustainability to include a hot tub on site that is almost completely heated by passive solar panels as well as a cob sauna that I got to help repair. Their creativity has shined through with their passive solar panels that they constructed with old metal roofing painted black and welded metal piping that works on a system where hot water rises into an old water tank that is then distributed to showers and the hot tub. At times, their sustainability goes beyond creative and could also be viewed as a movement in freeganism. They have a relationship with a local bakery so that they receive the day old goods for residents and to supplement the chicken feed when the bread is too stale for people. I even know other residents who dumpster-dived on occasion, but for the most part creative sustainability was on the small-scale and in everything that they did. From using cast iron skillets that become “seasoned” and do not require much washing or oil to extensive recycling and composting of things I never knew you could compost.

The biggest work in progress in green principles is their permaculture venture. Not only is it a huge step in sustainability, it is also what draws most of their interns to Lost Valley. As of right now, they have one expanding forest garden, but they are continually planting and waiting for nature to take its course. Permaculture will be explained further in a later section, but it is essentially “permanent agriculture” (Mollison 2011: 1). By sacrificing some of their time and energy away from productive annual crops, they are ensuring a more lasting agricultural system for the next generation.

Group Thinking/ Good Governance

In the beginning, Lost Valley operated on consensus. All major decisions were brought up at community meetings and everyone could give input. Each person in the community had an equal say in all decisions and meetings could be a time for people to discuss their feelings about various decisions. While this promoted good morale, meetings would last for hours and few decisions were ever made. Experts on different topics would become frustrated that their input was the same as someone with little knowledge of the subject, and often these initiators started leaving to make a difference elsewhere. Although it was egalitarian, it was not efficient. Lost Valley was in even more financial hardship than it is now (Rios 2011). Change had to be made.

Now, Lost Valley operates as a “sociocracy”, a term first used by a 19th century philosopher, Auguste Comte. In essence, it means governance by companions. A board of directors heads the entire Lost Valley non-profit, off-site. This board does not consist of community members and tries to remain impartial in making the best decisions for the eco-village and non-profit. This board elects an Executive Director who then appoints three “circle” directors. These directors can then create their “circles”, which are similar to small committees. The four directors, plus three elected representatives from each of the three main circles, and one land steward who represents the land, animals, ancestors, past residents and neighbors make up the Stewardship Council. This council makes all major decisions about the eco-village, though they have to go through the board of directors. New circles are made as needed by an existing circle who feels that an issue has arose that requires a new circle, and they will then elect someone from their circle to

lead the next circle and so on (Lost Valley 2013) (Rios 2011).

This system has sacrificed a bit of its egalitarian beginnings, but it has made the community more efficient and able to make swifter decisions. If they had continued down the road of consensus it would not have been sustainable because the community was not a model of a steady-state economy, but rather it was a dreaded stagnate economy. When this change happened several members left and it appeared that the eco-village would go under, but Lost Valley is resilient and although not rich, it is now more financially solvent than before (Rios 2011).

Grassroots Growth

Due to inherited zoning from the Christian youth camp, Lost Valley does have the ability to provide more housing for up to twenty-five more staff members in the future, though this may be a far way off. Lost Valley since its inception has been a grassroots movement to create an intentional community out of an existing non-eco-village settlement (Lost Valley 2013). Being that their focus has been on “greening” the existing property first, the idea of new development is not yet a viable option.

Over the years, Lost Valley has had a lot of growth at the literal grassroots level. By focusing on permaculture and working with the forest and land they inherited, they have enjoyed growth in their perennial orchards, annual farms, chickens and beekeeping. The more they create systems that are nearly self-sustainable also frees up their time to work on other ventures, especially their educational programs. This is where they add to grassroots growth at a larger community level. By educating others on permaculture, nonviolent communication, and sustainable building they are contributing to making a

more peaceable world as that knowledge disseminates to larger populations.

A Peaceable Society

Lost Valley is working on continual improvement, an important aspect of a peaceable society. While they have disagreements from time to time, their work in nonviolent communication has transformed the way they deal with conflict. They are sufficiently incorporating all aspects of the 4G Solution, though they have the most work in sustainability, more so in financial sustainability than environmental sustainability. Efforts in cooperative business practices could prove useful in strengthening this aspect of the 4G Solution. They have created a community that embraces global equality with their low barriers to entry and to education. If they can continue this strength while gaining financial independence, it is my belief that Lost Valley could become a model for other eco-villages and small communities.

Permaculture

As mentioned earlier, permaculture is “permanent agriculture”, though now it is doubly known as “permanent culture”. It is a system that had a lot of its founding principles in Masanobu Fukuoka starting in the 1930s. He called it “do-nothing” farming versus the “know-nothing” farming that was becoming popularized with industrialization (Fukuoka 1978: xii-xiii). The term itself comes from Bill Mollison and David Holmgren, the fathers of permaculture. When summarizing Fukuoka’s words to define permaculture, Bill Mollison states:

It is a philosophy of working with, rather than against nature; of protracted and thoughtful observation rather than protracted and thoughtless labor; and of looking at plants and animals in all their functions, rather than treating elements

as a single-product system (Mollison 2011: 1).

Places like Lost Valley are part of this agri-cultural revolution. During the course of my internship, we would walk around with our internship coordinator, observe and then come up with possible permaculture design ideas. Permaculture requires a lot of observation. First, one must look at the piece of land. Is it sloped or flat? Is there a water source onsite? The list is long but thoughtful. Once consideration is given to every aspect of the land, including the best place to design the house, then a design can be made creating various zones. The zone closest to the home would be the home garden, the things you would use nearly everyday. By the time you get out to Zone 4, it is much more a forest garden than anything else (Mollison 2011: 8-14).

It is so far from conventional farming, that at first I did not get it. When I wandered into the Forest Garden at Lost Valley I remember thinking that everyone had just forgotten about this garden and let it go into disrepair. What I did not see and later learned was actually there astounded me. The intricate systems that were all working together from ground cover to nitrogen-fixers, a lot of thought had gone into this garden. I was so inspired by it that I worked on my first permaculture design map by simply mapping out the various species and their functions of the entire garden so that the next time a city girl like me came by they would see the garden for all its beauty.

To call it a garden is somewhat demeaning because it is essentially nature working together, each doing their function. The easiest way it was described to me was through the Three Sisters. As Justin explained, the Three Sisters were corn, beans and squash. It was a Native American farming method, but would definitely qualify as permaculture.

The corn acts as a pole for the beans to climb up, the beans act as a nitrogen-fixer in the soil and the squash acts as ground cover that will prevent weeds. At the end of it, you have three crops that will grow better simply because you are fully utilizing each one's function (Michelson 2013).

More than just crops, permaculture values and utilizes animal's functions as well. Chickens, for example, should be part of any permaculture design. They not only give eggs and eat food scraps, but through their foraging and scratching they can prepare soil for farming without having to use any human manual labor, the key is to just let a chicken be a chicken (Mollison 2011: 6-7). This goes for other animals as well, like Cobb Hill, horse and cow manure can be turned into good soil when the animal is treated right and the manure is not wasted as it is in industrial farms.

The transferability to urban life could be done on a smaller scale in a home garden. Skills learned at weekend workshops or month-long courses have plenty of urban possibilities. Books, like Gaia's Garden, can work as guides for people that do not have access to a course. The book teaches how to integrate "isolated and incomplete pieces into a vigorous, thriving backyard ecosystem that benefits both people and wildlife" (Hemenway 2000: 1). City chickens have been popularized in many large cities like Portland, but there are others where the law does not allow it (Associated Press 2009). These would be cost-free policy changes that would work to make a city more sustainable by providing local eggs, cutting down on food waste, and creating richer soil for future generations.

Greywater Systems

Although I never got to see the installation of a greywater system at Lost Valley, I was part of a group that surveyed the land and the various sites where a greywater system would be useful. “Any wastewater generated in the home, except from toilets, is called greywater. Dish, shower, sink, and laundry greywater comprise 50-80% of residential ‘wastewater’” (Ludwig 2009: 2). This in turn can be used for landscape irrigation after being treated through a greywater system. Toilet water would be considered blackwater. Basically, a greywater system eases pressure on a septic system or water treatment plant, lowering the costs all around. On top of that, the energy that is saved throughout the system is immense.

At Lost Valley we were looking to create greywater systems at the laundry facility, shower area and sinks. These are high-water use areas that would make sense to invest some money in a greywater system. Most states do not even have greywater-use laws and instead continue to label it as just wastewater, thus making it illegal to be reused in any way. Though progress is happening in various states, it is only a handful out of fifty and some of them are very restrictive.

Arizona, an extremely arid state, has the most progressive greywater laws and they should be emulated in legislation for all other states. They have created a three-tier system for greywater systems. The first tier is for households using less than 400 gallons of water a day. If they follow basic guidelines that the state provides, they do not need a permit to use greywater. The second tier is for multi-family households or businesses that use less than 11,356 liters a day. They must follow all state guidelines and obtain a permit. Then, there is the third tier for businesses using over 11,356 liters a day, which

regulators consider for permits on a case-by-case basis. As well, systems are judged on performance, not how the system was built, which leaves room for innovation (Graf 2013 1-2). Though Arizona has more reason to take the risk with greywater, since their freshwater is in short supply, the fact is that there is little risk involved with greywater systems. It is estimated that there are currently 8 million greywater systems in the United States with 22 million users and there has not been one documented case of greywater transmitted illness going back to 1950 (Ludwig 2009).

In fact, restrictive laws and hard to obtain permits seem only to prohibit licensed contractors from creating greywater systems rather than deterring households. It is estimated that in California, only 1 in 8,000 greywater systems is permitted and in the United States there are 8 million unpermitted systems (Ludwig 2009). The missed opportunity of getting businesses involved in greywater systems leads to the waste of millions of gallons of freshwater every year.

State policymakers should consider looser regulations on greywater systems and permits. In order to achieve progress in sustainability, we must not continue the needless waste of fresh drinking water when greywater would suffice. At the very least, every state should have greywater use laws that allow for its reuse in toilets. This practice would be easy to implement in urban populations by retrofitting shower and sink plumbing in apartments to be redirected to the toilets rather than the city's wastewater treatment plant. Furthermore, this could create jobs in this industry and save city's money through reduced pressure on their water treatment plants. A further benefit of greywater systems is that it makes households more conscious of the products they are

using. Being that a greywater system requires you to use biogradable and non-toxic soaps, shampoos and detergents, it indirectly causes a growth in the sustainable businesses that produce these products.

Conclusion

Urban communities could learn a lot from rural sustainability movements. Eco-villages are an excellent example of intentional communities that are creating more peaceable societies, revealed through examining them within the 4G Solution. While no eco-village is perfect, the intention of a peaceful society is not to create a perfect society, rather a society that is structured to be able to live sustainably, deal with conflict in a transformative way, is governed in a way that engages rather than alienates, and promotes equality.

While eco-villages like Findhorn and Cobb Hill have more financial resources, their barriers to entry create a need for them to encompass a more equitable approach that would be available to a greater portion of the population. Lost Valley on the other hand, has more equitable practices, but they need to focus on their own sustainability in terms of finances, which could potentially be realized through creating co-operative business ventures within the community.

Findhorn exceeds in green principles with their low ecological footprint and their natural building techniques as well their deep democracy tools for good governance display the most equitable governance policy of all the eco-villages studied. Cobb Hill exceeds in transferability to urban populations because of their sustainable meat and cheese production, but these businesses could benefit from a cooperative business

structure. Overall, every eco-village has its various strengths and weaknesses, though their weaknesses do not stop them from being great examples of peaceable societies.

Permaculture and greywater systems are two rural sustainability activities that could easily be transferred and adapted to urban populations. Permaculture techniques exist for backyard gardening and would help to create more sustainable ecosystems. Beyond this, it utilizes each plant and the various properties that it possesses.

Incorporating greywater systems in urban populations, cities and towns could reduce pressure on their water treatment plants and save money through reduced maintenance and energy in this regard. A great starting point would be in creating policy to reuse greywater in toilets. Regulation for household greywater systems for irrigation should also be considered, as they have proven not to be detrimental to health. Permits should be made more accessible and systems should be evaluated on performance not on how it was created. Lobbying for greywater-use laws would be a win-win for all parties involved.

Chapter 4: Urban Sustainability Movements

This chapter will focus on various current urban sustainability movements in the United States and will also look at models internationally. The initial movements will focus on activities by citizens outside of any serious policy changes. Then, I will focus on various businesses that are making the move to sustainability, and finally discussing the progress some local governments have made to be more sustainable. This chapter will also concentrate on the negative things that policy and governments have done to hopefully show a starting point of how they should change. The 4G Solution will be included within each movement, but the focus will be on the strengths and limitations of each movement.

I am not wearing rose-colored glasses in this chapter, the path towards building a more sustainable and peaceable urban population will be difficult, especially in depressed areas, but it is my belief that it is necessary to focus on the positive and try to expand that rather than to focus solely on the negative and leave people feeling overwhelmed that they could do anything to help. I feel it is relevant to first briefly discuss the failure of development that has swept across many parts of the United States, leaving several urban areas at their lowest points since the Great Depression. My example in this brief section will be the Rust Belt, my home and the inspiration for this thesis.

The Failure of Development

“Delusion and disappointment, failures and crimes have been the steady companions of development and tell a common story: it did not work” (Sachs 1992: 1). While Sachs may have it right, his work tends to clump the United States together as if

the entire country was in on the scam of development. What he fails to recognize is that for millions of people within the country, the system of development has failed as well. The Rust Belt for example, a literal region of decay in the country, stands out amongst the group of Americans that were duped as well.

On one hand, the myth and failure of development that Sachs speaks about was in many ways exactly that, but on the other hand as Western style development is attached to the capitalist system it was actually quite successful. Looking at the principles of capitalism through a critic's eyes in the *Communist Manifesto*, Marx and Engels state, "The bourgeoisie cannot exist without constantly revolutionizing the instruments of production, and thereby the relations of production, and with them the whole relations of society" (Marx and Engels 1964: 62-63). Looking at development and capitalism through this lens, the reality of what happened in the Rust Belt becomes clearer. As American workers in the Rust Belt began to have a voice and demand more, the bourgeoisie needed to "revolutionize" the entire system of production by moving it overseas to a cheaper labor market.

The devastation and job loss that was caused in the area can also be revealed by looking at proponents of capitalism. Looking at Jensen and Meckling's seminal work in agency theory in 1976, one can see how corporations jumped onboard the "maximize shareholder profits" train. This work shaped the shareholder capitalism that the United States embraces today for better or worse. It took the remaining human elements out of a corporation, and made a corporation's sole allegiance to be to maximizing shareholder profits (Jensen and Meckling 1976). Any heart that remained in corporations was taken

out. Development and capitalism in this way failed places like Detroit and Cleveland would feel its effects, but I do not think this means development as a whole is dead.

Sustainable urban development is possible with a focus on the right activities and the right tools to measure success. The narrative should be changed to the success of development, a type of development that will ensure future generations can enjoy sustainable and peaceable cities. Finding the new sustainable narratives that people are writing amid “decaying” towns and building upon them is not a failure of development, it is what development should be.

Movements By Citizens

Everyone’s got a margin of discretionary energy- ten percent, twenty percent- that isn’t used up making their way in the world. That’s the energy that’s available for social change. If you get a whole community to start focusing their energy together, building on success just as a business builds on successful products, then you get social change (Daniel Taylor as quoted by McKibbon 2007: 211).

In the midst of a country that reports progress in terms of increases in GDP on the nightly news and encourages everyone to consume more to help the economy, there are a growing number of citizens that are resisting. As Americans have seen a steady decline in happiness levels, longer working hours, and declining wages, they are waking up and looking for an alternative (Heinberg 2011: 257). Not everyone wants to live in a rural area, share communal kitchens and spaces, or grow their own food. Though I enjoyed my experience at Lost Valley, city living is more desirable to me and millions of others. Urbanites love their cities and enjoy the conveniences that come with living in an urban setting, but many also want to live more sustainably and get in touch with nature. Sustainability is not limited to the rural few, it is possible to make change in the urban

millions.

Localization of Food Production

Ever wonder why soybean products can be found in two-thirds of all processed foods? It may have something to do with the fact that “about seventy percent of the value of the American soy bean comes straight from the U.S. government.” Ditto for high-fructose corn syrup. Essentially, we are subsidizing Cheetos. Imagine eliminating those subsidies altogether, so you weren’t tilting the playing field. Or imagine tilting it toward small, local producers, rewarding those whose farms didn’t use much energy, and grew food for their neighbors (with a quote by Felicity Lawrence, McKibben 2007: 87).

The domestic farm subsidy policy in the United States clearly needs to be reformed to encourage smaller farmers, not run them out of business. The United States food production system uses a lot of energy in the process through transportation, the production of fertilizer and in the fuel used to run the farm machinery. With the largest agricultural companies receiving the most in subsidies each year and with no incentive to be sustainable, the environment has suffered. Local food uses less fossil fuels, they are more resilient, and they use less energy during the production of their crops (Shirley 2013: 516).

There is no standard definition for local food. The Maine Ordinance defines it through its method of sale, being only direct-to-consumer sales. A definition may come in the future, but the lack of a clear definition does allow for local laws to address the unique needs of each community (Shirley 2013: 516). Often the consumer culture of an area defines it as more engaged citizens will often talk with farmers at the market or ask the waiter at a restaurant where the food comes from.

Mangoes from Mexico, Argentinian beef, or that strawberry in December shipped from Chile all come with hidden costs: greenhouse gases, use of diminishing fossil fuel, less nutrition and a disengagement from our food. If we are what we eat, then most of us are wasteful and unsustainable in this regard. In the United States, an average meal has traveled over 2,000 kilometers before it ends up on our plate, and that number is significantly larger if we are eating off-season fruits and vegetables. Imported certified organic foods can be even worse. One British study found that in a shopping basket of 26 imported organic items, they had travelled nearly 240,000 kilometers, meaning enough carbon dioxide was released into the atmosphere as a four-person household does in cooking for eight months (Monteith 2006: 2).

These measurements are found by calculating food miles, or “the distance food travels from where it was grown or raised to where it is purchased by the consumer” (Monteith 2006: 1). Though some argue that this calculation is not even far enough because it does not consider the miles of the production process, like imported fertilizers, machinery, pesticides and containers. In either case, the “cost” of our food is much higher than the price tag. Policy change in requiring companies to include food miles on the label could make many think twice about their 7,000 kilometer strawberry when there is a 7 kilometer apple next to it. This change should not be limited to produce, processed foods usually have more food miles and perhaps this information would encourage people to eat more fresh food or at least eat locally produced processed foods. Even outside of policy change, local food markets could begin a campaign to include food miles on their products, or consumers could begin to demand that supermarkets display this information on products.

Farmers Markets

Every farmers market is different because every local community and its producers are different, but generally they are defined as “recurrent markets at fixed locations where farm products are sold by farmers themselves” (Brown 2001: 658). This also usually includes other vendors as well, but they must be producers selling their own products (Brown 2001: 658). Farmers markets have been increasing in recent years. In 1970 there was thought to be about 340 farmers markets in the United States. By 1994 that number increased to 1,700 and by 2004 that number jumped to 3700 (McKibben 2007: 81).

A recent study by sociologists researching consumer behaviors found that consumers have ten times as many conversations at farmers markets than supermarkets (McKibben 2007: 105). I can attest to this when I roam my local farmers market in Roseburg, Oregon. I speak Spanish with the Jose, who makes fresh tamales from local ingredients and then I inevitably end up in a conversation with Donna about her animals and whom I buy fresh local meat from. Then, I stroll over to the Phoenix School, an area farm-to-school program, to buy my produce. I may not know all their names, but conversations are plentiful and I am always left in a good mood afterwards. At the same time, I am also guilty of going to the grocery store for off-season produce, though much less so since becoming more aware of its impact.

There are other benefits to a farmers market. Typically, the food at a farmers market is picked the day before, uses little to no pesticides, contains no hormones and more ripening is allowed. While this is not universal, studies have found that consumers

at farmers markets demand it; therefore, it is a safe assumption. Thus, the food at a farmers market is healthier and more delicious than the same food at the supermarket. On top of that, they create jobs in the local community and keep money in the local economy (Shirley 2013: 519-520).

San Francisco: A Local Foods Model

There is one city that stands above others as a model for the local food movement, San Francisco, California. As one food enthusiast writes: “In San Francisco eating local food has gone from a niche to mass movement” (Wickes 2013). When this movement began is up for debate, but two turning points include: the decision in 1964 by the grocery store Bi-Rite in Mission District to only carry products from small-scale farms and producers and the 1971 opening of Chez Panisse by Alice Waters, a restaurant that only uses local ingredients. These two events sparked what is now commonplace in San Francisco, local grocers with local products, restaurants that source from local producers, and now even seafood suppliers at the Ferry Building marketplace that have the name of the boat and locale of where the fish came from (Wickes 2013). Today, Chez Panisse and Bi-Rite still stand as local landmarks and thriving businesses, but amongst hundreds of others who have taken the same path. It is what Alice Waters, whom many people consider the mother of the slow and local food movement, calls a “delicious revolution” (Ruberry 2013).

The movement has even gone beyond groceries and restaurants and gotten into schools. Seventeen years ago, Alice Waters joined forces with a local principal to put a one-acre garden in their schoolyard. Waters, believed that “when the hearts and minds of

our children are captured by a school lunch curriculum, enriched with experience in the garden, sustainability will become the lens through which they see the world” (Edible Schoolyard 2013). Over the years this has grown to include not only garden time each week for students, but also kitchen time where they learn how to cook with the fresh ingredients from the garden. For many children, this is the first time they are eating local organic food. The garden has grown over the years, now boasting rainwater collection cisterns and an expanding chicken coop. The program has grown as well, now including six Edible Schoolyard projects across the country (Edible Schoolyard 2013).

Waters did not stop with the Edible Schoolyard, she also helped to get healthier more local food into all San Francisco schools. Today, King Middle School serves as a central kitchen for sixteen schools in the district, feeding 10,000 children everyday with fresh food. The cafeteria has composting stations and recycling bins to encourage students into sustainability (Edible Schoolyard 2013). More recently, San Francisco has signed with Revolution Foods for all 114 schools in the district. Revolution Foods is a company founded by two mothers who wanted to see more healthy food in their children’s lunches. They use mostly organic fruits and vegetables, and though they cost a little more than the mystery meat lunch meats served elsewhere, the parents seem willing to give their children a little extra to buy them. Actually, schools that have implemented healthier lunch programs have made more profit than before. One study found schools were making an additional \$1.1 million (Ruberry 2013). For children on free lunch programs, the added revenue from other children makes up for the difference.

The local food movement has also spread to the rest of California, where laws have been passed to enable citizens to use their own kitchen to sell to the commercial market. This has further added to value-added local food products entering the market in California (Cheeseman 2013). Other cities outside the state are beginning to take notice, but San Francisco stands as a model for policy change towards greater sustainability and creating qualitative improvement. With their booming economy and high standard of living, it is only a matter of time before other cities follow suit.

Urban Farming

This section will briefly discuss urban farming, which partly falls under the localization of food, but deserves its own section. Urban Farming is a recent trend to use rooftops, public land, or abandoned lots to create farms within city limits. While urban farming exists in several cities throughout the United States, Detroit's urban farms may hold the most significance.

In the 1950s boom of Detroit their population neared two million, but as industry declined so did their population. The decline began in the 1970s, but was most devastating in the last decade when Detroit lost twenty-five percent of its population. The last census showed that now the population looms at 713,000 (Linebaugh 2011). That means that Detroit has lost over sixty percent of its population. This has driven down home prices and left abandoned houses and vacant lots sprinkled throughout the city. The city currently has over 80,000 vacant houses (Linebaugh 2011).

As unemployment rose, so did the crime rate. Middle-class families began to move out to the suburbs leaving a once thriving metropolis looking more like a ghost

town. The mass exodus to the suburbs has left too much infrastructure and tax burden for the remaining residents. Detroit filed for bankruptcy July 18th, the largest city in the United States to do so (Bloomberg News 2013). The city is sinking and fast. The lack of proper funding or tax collection has had a snowball effect leading to a weak school system and poor social services, such as trash collection and street lighting. These things make moving to the suburbs seem all the more enticing for families.

There are a lot of skeptics that think Detroit will continue to decline into oblivion because of all the factors previously mentioned, but there are still many hopeful Detroit citizens that believe Detroit can transform itself again. From being known as “Motor City” to becoming a more cultural city through Motown music and being nicknamed “Motown” to now being known as the “Buckle of the Rust Belt” many residents think it is possible to redefine and reimagine Detroit beyond its latter nickname (Ashlock 2012).

Many of these people are part of the urban farming movement there. Urban lots are cheap, and with some land remediation (to be discussed more in-depth in the next section), these once useless lots can be repurposed again to create a local food supply. These farmers discuss how for the most part, there is no government there. Greg Willerer, a Detroit urban farmer, comments: “If something were to happen we have to handle that ourselves” (Greg Willerer as quoted by Bloomberg News 2013). So that is exactly what citizens of Detroit are doing, reclaiming an agrarian past to move forward into the future.

These urban farmers have pushed local government to change zoning laws to permit the urban farms, which began outside of policy change. With no big businesses

looking to take the reigns, thankfully the rebuilding of Detroit has happened in the hands of its citizens. In the midst of bankruptcy, urban farms are one of Detroit's bright spots.

Even outside of depressed urban areas like Detroit, urban farming is still a viable option. Rooftops are often under utilized, and New York has invested \$600,000 in efforts to expand a rooftop farming business. Seattle is creating a food forest that will be open to the public. These financially stable cities still see the value in local food and the intrinsic value of a different kind of growth in the city (Bloomberg News 2013).

Placemaking

Placemaking is the act of creating a shared vision based on a community's needs and assets, culture and history, local climate and topography. Placemaking is as much a psychological ownership and reclamation of space as it is about physically building a place (City Repair Project 2006: 15).

I had the honor of attending the 2013 Village Building Convergence (VBC) in Portland, a ten-day placemaking event, and in some ways you have to see placemaking to fully understand it, but for the purposes of this thesis I will attempt to articulate the event. Below is one placemaking site during the convergence:

Figure 6:



This site, known as Sunnyside Piazza, is a giant sunflower painted at the intersection of a neighborhood. At each corner are cob benches, community boards or decorations put there to encourage people to hang out at the intersection. During the VBC forty-nine placemaking projects around the city were happening. Anyone can come and volunteer, but I found that at many of the sites, it was people from that neighborhood that were participating. Children were alongside their parents, and everyone was lending a hand to reclaim the intersection as a space to meet. Any neighborhood that wants to be considered for a VBC project must gain an 80% approval from its community members, to make the neighborhood and active and willing participant in the process. Many sites have teamed up with local businesses to provide free food and drinks to volunteers. Projects included: beautifying intersections, installing cob insulation at a local non-profit, revamping a fence of doors at an emergency shelter vacant lot downtown, seminars about mycoremediation and phytoremediation, urban permaculture techniques, and installing a community garden at a local pre-school (City Repair Project 2013).

The VBC is quite overwhelming because there is so much to learn and participate in, but it is so beautiful to see so many urban dwellers bringing back a sense of

community in the big city. While I wanted to visit nearly every site, we could only stay for two out of the ten days of the VBC before a group of us headed back to Lost Valley. As seen above, we got to help out at the Sunnyside Piazza by picking up a brush and helping to repaint the intersection, which is done annually. We also got to learn about mycoremediation and phytoremediation. The seminars were extremely interesting because the speakers were passionate and the techniques were truly urban developments.

While I feel I could write an entire section on mycoremediation and phytoremediation, I include it in this section as it was part of the placemaking event in Portland. Mycoremediation is the use of fungi or mushrooms to heal contaminated land, while phytoremediation is the use of plants to do the same thing. The seminar was about community scale remediation projects. Mycoremediation has the potential to clean up land after oil spills and other soil deeply damaged by heavy metals. The speaker, Leila Darwish, was so passionate about her work that everyone left thinking that fungi really could save the planet. She talked of how she loved abandoned gas stations because she could envision an amazing garden on them after remediation and a community coming together to make it happen. The truly amazing thing about remediation is simply that plants can bind and extract harmful chemicals while fungi can actually transform and break them down. Sunflowers and Alpine Pennycress are two plants that are superstars in remediation. Sunflowers can “suck” up the lead in a contaminated lot, though she did note that you have to safely dispose of the sunflower because it cannot breakdown the lead, only extract it (Darwish 2013).

I learned numerous other things at the VBC, but I was just happy to learn of placemaking. The idea has spread to other cities now, though perhaps not at the same level as Portland, yet. The idea of reclaiming a space for the community not only shows grassroots growth and global equality within the 4G Solution, but it is also based on green principles because of the use of cob and natural materials in the projects.

If local governments worked with the communities, it would be useful to provide some funding to projects like this. When there is an increased sense of community, neighborhoods become safer. The VBC is an excellent example, though it should be noted that besides the emergency shelter downtown, there was not much diversity in the participation. To utilize this great tool as a way to reduce crime and create a peaceable society, people in at-risk areas need to be engaged and empowered too, the isolation of this group will only continue to perpetuate crime and social injustice in the area (Lewis 2013: 3).

A Peaceable Society

While no one activity can make a community or urban population peaceable, it can add to the peaceability of society by breaking down structural violence and strengthening each component of the 4G Solution. It is important to focus on what citizens are doing right, so we know where to focus development efforts and dollars. Building upon these activities can keep money in the local economy. \$100 spent in a local bookstore keeps \$45 in the local economy, while shopping at a chain bookstore keeps only \$13 local (Norberg-Hodge 2011). Thus, strengthening local movements by citizens with policy change will actually strengthen the local economy by keeping more

jobs and more money in the community.

Localizing food production has been furthered by grassroots growth and in turn has strengthened green principles. Good governance examples, like in San Francisco, show that local governments can help to strengthen these movements. Making local food more accessible to lower income families can improve global equality and can be achieved through adopting and expanding programs similar to the Edible Schoolyard. Urban farming projects should not just be allowed, they should be further supported by government through policy change and lowering zoning restrictions for these activities.

Placemaking can provide a valuable tool for reducing crime by strengthening ties in the local community. By reclaiming public spaces, people are in effect creating more equality, though these efforts need to be expanded to include more diverse populations. Using sustainable techniques in these spaces, like cob benches or natural materials, is not only cheaper for a local community to implement these ideas, but it also introduces natural building to a larger population. The sense of community that is recaptured may be beyond the 4G Solution, but it does add to group thinking and good governance because it is a community supported project. By promoting these activities in local government there may not be an economic benefit, but lower crime and a more tight-knit community typically lead to more community loyalty and cost-savings from a decrease in crime.

Sustainable Business Practices

Gone is the tight connection between the company, its community, even its country. Vanishing too are the paternalistic corporate heads who used to feel a sense of responsibility for their local community (Robert Reich as quoted by Shuman 1998: 7).

Robert Reich, former Secretary of Labor from 1993 to 1997 during the Clinton administration, stated the above quote when he was imploring national policymakers to make a more friendly business environment. It is my belief that he is wrong. After the financial crisis in 2008, the time is now to recreate that connection and sense of responsibility to the local community, to put the soul back in businesses.

Without including business into any model for a peaceable society, we are only fooling ourselves that it is a viable option, but if we look at business models that could fit into a 4G Solution and could make sustainable qualitative improvements in their communities, then business and peace have a chance of intertwining. It is not my belief that businesses are inherently bad, but I do believe that the current economic growth fascination has spurred businesses to be more heartless and less loyal than in the past.

Cooperatives

Cooperatives are a business model that can exist within the capitalist structure, while having ideals based on community and cooperation. The Small Business Association (SBA) defines a cooperative as “a business or organization owned by and operated for the benefit of those using its services” (Small Business Association 2013). Expanding on this definition are also worker-owned cooperatives, which would be owned, operated, and for the benefit of its members. In either case, the profits and earnings are distributed among the members. Typically, people will buy a share of the cooperative, which could be set up to be equal shares or not. Usually, regardless of their share, decisions are one-member-one-vote (Small Business Association 2013).

As corporations have lost their souls and the instability in the current capitalist system is revealed, many more entrepreneurs are choosing the cooperative business structure. Today, there are more than 30,000 cooperatives in the United States that employ over one million people, hold more than \$3 trillion in assets, and pay more than \$25 billion in wages and benefits (University of Wisconsin Center for Cooperatives 2013). Cooperatives offer more stability than traditional businesses because members are not downsized during hard times. It has more of a democratic design versus a more hierarchical structure in a traditional business structure. This allows everyone to have a voice in the business (Small Business Association 2013). Innovation can also be more prevalent in a cooperative work setting because advances in technology and automation can reward all members of the cooperative rather than be a source of potential downsizing.

Mondragon, Basque Country, Spain

“What is needed are hard-nosed proposals for pragmatically improving our institutions. Instead of indulging in utopian dreams we must accommodate to practical realities” (Erik Wright and Archon Fung as quoted by Redondo 2011: 278-279).

While there are many great examples of cooperatives in the United States, Mondragon in the Basque Country of Spain serves as a model example of what is possible with a cooperative business structure. Founded in 1955 by José María Arizmendiarieta and five of his students when they created an industrial cooperative in Mondragon, Spain. Today, Mondragon Corporation includes 256 companies and

92,773 employees. They maintain a strong presence in the Basque Country with 42 percent of their workforce being there. They have also spread through the rest of Spain and internationally. As of 2008, they were the third largest employer in Spain and the seventh largest industrial group in sales. They maintained this strong presence and even recorded a 19 percent increase in revenue in 2008 amid the financial crisis spiraling the rest of their country into a tailspin (Redondo 2011: 279).

Examining how they can do this is pertinent to understanding non-capitalist ideas that are thriving in a capitalist society. Their business is divided into four main areas: industry, distribution, finance and education. Each of these areas functions with autonomy, though they have a shared strategy throughout the group of companies (Redondo 2011: 279). They link them through the credit union that they have created, the Caja Laboral Popular. This credit union offers initial loans to a new cooperative venture with enough capital and supplies to get it through initial losses during its first two years. In exchange, the new cooperative agrees to create bylaws and a constitution similar to the vision of its founder, Arizmendiarieta. The bank also has a staff to help new cooperatives with organizational skills and general technical help (Foote Whyte 1982: 3).

The truly unique thing about Mondragon, even among other cooperatives, is through their financial instrument being debt rather than equity. A weakness of many cooperatives can be their success. When cooperatives become so successful, initial members no longer want to dilute their shares with new members, or when these members retire, their share is so large that new members cannot fill the void and private

investors must be found. In Mondragon this does not happen because their initial buy-in is thought of as a loan, which is deposited into the member's account. In this way, each member account is their initial buy-in plus interest plus profit sharing. This amount is available to the worker at any time with some deductions or in full at their retirement. Furthermore, to protect themselves in economic downturns they retain 20 percent of profits in a reserve fund to get them through (Foote Whyte 1982: 3).

Financial sustainability alone will not make a cooperative successful. It is also the principles and good governance within the management structure that add to Mondragon's strength. A weakness in many cooperatives can be engaging people in the management of the business, inevitably some workers participate more than others (Small Business Association 2013). In Mondragon this is not the case. They have several ways that they get all members involved in the collective cooperative. Annually, they hold a General Assembly, which all members attend. This is a time for members to evaluate the performance of the past year and vote on a plan for the future. This plan is then considered by the elected Governing Council, the twelve cooperative members who effectively manage Mondragon. Beyond these structures they have a Social Council that every group of ten members elects a representative to be on. This council serves to deal with working conditions, safety and health, and compensation concerns. They act as an advisory board to the Governing Council. For Mondragon, this is still not enough. To ensure more worker participation, members are expected to attend skill building classes in ethics, morals, values, how to accept change, learning how to criticize and accept criticism, and working in a cooperative environment. This ensures that workers are engaged and have the skills necessary to effectively do so (Campbell 2011: 329-332).

Mondragon cannot be replicated but it can be emulated. Through good governance policy, financial stability, and principles that promote equality and justice, they are one of the best examples of a peaceable business. By limiting profits with a reserve, they are ensuring their future. On top of this, the supportive work environment that they have created protects member's jobs. When one cooperative is not doing well, the surplus workers are relocated to a different cooperative in the collective. Some members even agree to lower salaries in order to keep all members working (Redondo 2011: 282). These actions of solidarity and cooperation are a reflection of a business that is truly practicing its mission and principles. The education provided to members also adds to more equality in this regard. While Mondragon lacks a vision for environmental sustainability, they do take seriously their social responsibility in terms of all their members and the surrounding communities. In the future, Mondragon should consider more green businesses to increase peaceability in every regard. In any case, if every business is run like Mondragon, then we would not have the greed inherent in our current capitalist business structure, at least not nearly as much.

Sustainability Incubators

A sustainability incubator is similar to a business incubator in that it helps entrepreneurs to start new businesses by offering advice and tools about how to best get their business off the ground. A sustainability incubator differs in that it concentrates on helping to start-up sustainable businesses. This can be done through research collaboration, advice on corporate law and licensing, grant support and navigation through government agencies, networking opportunities, or product and marketing

strategy support. As well, they promote some version of TBL for accounting (Fairleigh Dickinson University 2013).

Green Garage Project, Detroit

Tom and Peggy Brennan started the Green Garage Detroit project back in 2008 with the purchase of an old showroom for Model Ts. They had a vision for community development and were able to get over two hundred local residents involved in renovating the space to be a net zero building, meaning that it does not create any carbon emissions. Its design was specially created to cut its energy by 90% with the remaining 10% coming from solar energy that heats the large space, which is a feat in the harsh winters and hot summers of Detroit. Today the building serves as creative office space for sustainable businesses, rent ranges from \$50 to \$1000 depending on each company's needs (Bruder 2012). This low cost barrier to entry promotes global equality in the 4G Solution by making it possible for low-income individuals to start a business. This is especially important in a city like Detroit that is bankrupt.

The key that makes Green Garage stand out amongst other projects is not only its cooperative effort, but its strict dedication to growing triple bottom line businesses naturally. They provide training sessions and advice to aspiring entrepreneurs in the building and often advise them to nurture their "seed" into a viable sustainable business plan and to look at all community partnerships before going to a bank for a loan and accruing debt (Green Garage 2012). This provides a way for socially conscious entrepreneurs to calculate its business' success in terms of how it is impacting the community and people involved, the effect on the ecosystem, and the monetary value to

the shareholders. It also provides an avenue for grassroots growth because it engages local businesses into the process.

Beyond this, Green Garage has several projects that it works on with the community. One such project is “Green Alleys”, in which they are turning dilapidated, poorly lit, and potentially dangerous alleys in Detroit into green and sustainable walkways for the community. Their alleyways have native plants from the area as well as permeable pavements. The permeable pavements allow for rainwater to enter the ground naturally, providing a natural filter before it mixes with groundwater that eventually ends up in the city’s water system. The system has eliminated flooding in the alleys. They also have an urban sustainability library open to the public (Green Garage 2012). These aspects add to the grassroots growth and thus peaceability of the city because community members come together to volunteer and at the same time learn new sustainability techniques, which they can spread onto a larger scale.

Strengths

Looking at post-development through Arturo Escobar’s eyes, “the need to rely less on expert knowledge and more on ordinary people’s attempts at constructing more humane and culturally and ecologically sustainable worlds...” (Escobar 2006: 448), we can see the value in an enterprise like Green Garage. He has also stated that post-development “generally meant an era in which development would no longer be the central organizing principle of social life” (Escobar 2006: 448). In the case of Green Garage, their post-development strategy is essentially grassroots growth through the triple bottom line and slow.

This alternative business incubator breaks away from the norm by not creating a one-size-fits-all approach to creating sustainable development (Bruder 2012). They nurture each start-up and help each idea find their own path to reality, which is essentially what Escobar defines as post-development. His work speaks of the underdeveloped or third world, but it can be argued that the so-called developed world could use a lesson in post-development, not just in how they interact with underdeveloped countries, but within their own countries.

Also, the community involvement from its inception has been another strength for Green Garage. It used community volunteers to come up with its concept and design, and it looks for reusable local supplies from the community. For example, one start-up within Green Garage, De-Tread, uses discarded tires that are strewn about the city as trash. Green Garage has used the community to help them clean up vacant lots of this trash and potential health hazard, thus providing its founder with a material that he converts to other products such as floor mats for cars, useful in a city like Detroit (Bruder 2012). This would also fall into green principles within the 4G Solution because they are essentially using trash to create a business.

Its triple bottom line approach is the core of its business model. It allows each start-up to assess its impact as well as give any entrepreneur a clear path to take its business in the future. By avoiding bank loans and debt and using the community to create a supply and possible consumer network, the businesses at Green Garage have a lot better chance at success. Many other business incubators tend to rush the process of development and create a one-size-fits-all approach towards development, which can

lead one to a development that falls short on many levels (Bruder 2012). The success at Green Garage is promising, but whether this success will make a dent in the collapsing city in which it resides is yet to be seen.

Limitations

Taking a step in the right direction means nothing if the limitations pushing against you are too great that you end up moving backwards. Start-ups like Green Garage create a viable grassroots growth, sustainable path, but they are held back by their own city and state governments that are set in their old ways of thinking about development. The very officials they elected to work for them are the ones seemingly working the hardest against them.

The governor of Michigan recently signed into law a bill that allows him to appoint emergency financial managers that will travel to cities and have the authority to do whatever is necessary to balance their budgets. This authority extends to terminating public employees, suspending collective bargaining and even dismantling local governments. This law essentially strips the citizens of cities like Detroit of their right to self-determination (Hill 2011).

Also, Detroit's mayor, David Bing, appears to be stuck in the traditional economic model that has been ruling Detroit for the last century. Running on the old "worker, employer, work in, paycheck out, with orders coming straight down from the top" (Hill 2011), Detroit could very well repeat its past mistakes despite its progressive citizens. Mayor Bing had an open call for proposals on how to fix Detroit, but he looked to outside companies and NGOs rather than finding proposals from the inside. He is also

actively trying to court businesses to move to Detroit with tax incentives and rebates, and he does not seem to be concerned with what kind of business it is (Hill 2011). This poses a problem for the citizens of Detroit who want to determine their own future.

On the bright side, the mayor is willing to look into green technology proposals, but the funding available to court an entirely new industry may not be there. This is quite possibly another problem that faces organizations like Green Garage, funding. Right now additional funding seems to come out of the pockets of the Brenners, but what happens if their nurtured start-ups don't make any money? Their slow approach to creating a triple bottom line business is admirable, but is it feasible? At some point the money will run out if there is no money filtering in, and its entrepreneurs will need to eat. Many start-ups fail even with careful planning, and they may do well to look into some kind of co-operative organization to hedge their losses and share their gains. Though it helps to remain positive that endeavors like this will expand and become a model for the future. "The opportunity for reimagining is greatest where the collapse of the so-called American Dream has resulted in such extremes" (Hill 2011).

Activities of Local Governments and Policymakers

The only way communities can ensure their economic well-being is to stop chasing multinational firms with no community loyalties, and to start investing in community corporations. Prosperity follows when ownership, production, and consumption become intimately connected with place (Shuman 1998: 7).

Sustainable Local Government Practices

This section will highlight some previously mentioned activities of local governments and build upon how we can expand these initiatives as well as discuss what

some other local governments are doing. Some local governments in the United States appear to be working for their citizens, communities and environments. It is imperative in this age of peak oil and climate change that we expand these activities to more cities and towns across the United States. This section will remain brief because throughout the thesis I have already entwined several government roles.

San Francisco may lead the crowd in terms of policy and a consumer-demanded local business environment, but other cities are not far behind. Portland, Oregon is working its way towards sustainability with city-wide weekly composting and recycling, and only bi-weekly garbage pickup to stimulate more sustainability (City of Portland 2013). They even have composting bins in the city parks. More than that, they have been receptive to community appeals in sustainability. When Mark Lakeman, the head of City Repair and the VBC, appealed to have light straw clay insulation approved by the local government, it did, making it legal now for others to use this natural building technique in their homes (Alternative Technology Advisory Committee 2011).

In terms of evaluative measures, the state of Maryland is headed in the right direction by implementing a GPI at the state level. Within Maryland, this GPI index should be applied at the local level as well. Once this is achieved, this method should be replicated in other states, so that state and local governments can ensure sustainable qualitative improvement.

Taking a cue from cooperative business structures is Green Bay, Wisconsin. Green Bay is known for only one thing, the Green Bay Packers, but in 1922 the Packers were on the brink of bankruptcy. The initial investors had invested too little, and it

appeared that the Packers would disappear; however, some fans stepped in and turned the team into a non-profit corporation. With the help of the city and the school board, the Packers became a community corporation where benefits stayed in the community. The municipality owns the football stadium, which uses the fees collected to maintain and upgrade the stadium. Beyond this, it has created very loyal fans because it is the fans and community that benefit from the entertainment and the profits of the Packers (Shuman 1998: 3-6).

Creating community corporations is imperative to create a sustainable and peaceable society. It is my belief that corporations that are tied to the local community and have social responsibility towards their locales will be less likely to leave, downsize jobs, and pollute the environment surrounding them. This will also lead to a more stable local economy. Governments should support local investors and producers before thinking of pursuing foreign investors.

Social Services

“Whatever the cost of our libraries, the price is cheap compared to that of an ignorant nation” (Walter Kronkite as quoted by Programming Librarian 2013).

Social services, like libraries and parks hold an intrinsic value in them, and while communicating this value to budget committees could possibly be more effective, the sad truth is that in our current economic system intrinsic value equals zero. Hours, services, and employees are being cut (Halpin 2013: 1-3). With this research I have shown that there are new tools to measure success and put value on things previously not economically valued. This section will focus on libraries because of the research

available to me.

In 2010, the most recent polling for library data in the United States, forty percent of libraries reported decreases in state funding (American Library Association 2013). In the wake of the financial crisis, budgets are being slashed for libraries. Susan Imholz and Jennifer Weil Arns (2007: 5) suggest that it is possible to use TBL accounting practices for libraries to assess a value for libraries, and I agree. Though to go a step further, I think this TBL calculation would be even more beneficial after a city computes HPI and GPI because it would further boost the value of libraries.

In the United States there are currently 171 million people with library cards (American Library Association 2013), this is more than the amount of people that voted in the 2012 presidential election, which was only 126,831,812 (Kanalley 2012). This means that more people see value in our libraries than in choosing our president. This is a strong statement about the value of libraries to the American people. Libraries are a place to use public computers, receive free wifi, and have access to software and resources to create employment materials. In a time with 12 million unemployed Americans, reducing library access is a social injustice to these people (American Library Association 2013).

The reasons that budgets are being cut is simple, libraries are not a profitable economic entity. They are not directly raising the GDP nor are they lining the coffers of government officials. In recent years, as circulation, program attendance and computer use are increasing, budgets, hours, and staff are reduced. With a circulation of 2.46 billion materials a year, library usage is significant. Even physical visits have increased

32.7 percent over the last ten years (American Library Association 2013).

These statistics, while striking, still do not put an economic value on libraries. In my opinion, reducing social services should not even be an option when making budget cuts, yet they seem to be the first things cut. Every time I went to the library in the course of this research it was filled with people, yet the library is open only four days a week for twenty-four hours in total (Douglas County Library System 2013). These services are obviously valued by the citizens, but policy must reconceptualize progress so that it reflects the same value the citizens appear to put on libraries.

One study by Imholz and Arns looked at nine libraries in Southern Ohio and aimed to quantify reference questions, computer usage and other various services from the library. The study found that while the libraries spent \$74.4 million in operating costs, the library provided \$104 million in benefits to the community and its patrons (Imholz 2007: 37-38). This would be a pretty successful business. The problem is in getting these accounting principles more widely accepted by policymakers. At the grassroots level, library advocates could communicate these valuation methods to the broader public, so that citizens are at least armed with knowledge about their libraries true value. A more aware public tends to make a more actively engaged public in local policy.

Unsustainable Local Government Practices

This final section will focus on local government practices that are unsustainable or that are hindering sustainability activities. This section was placed here, not to end on a negative note, but to serve as a starting point of where policy change needs to happen

as soon as possible. As well, all the positive movements addressed thus far should sufficiently show successful alternatives to unsustainable practices. This only attempts to diagnose what policies should be changed. The main focus here will be subsidy policy, as it is most related to this subject matter. The wide range and innumerably different types of subsidies within the United States limits this research in being able to examine every type of subsidy that is currently available to businesses.

Subsidy Policy

The combination of subsidies—or ‘perverse incentives’— to develop fossil fuel energy sources, and a lack of sufficient incentives to develop renewable energy and promote energy efficiency, distorts energy policy in ways that have helped cause, and continue to exacerbate, our climate change problem” (Senior Environmental Law Institute Attorney, John Pendergrass as quoted by Environmental Law Institute 2009).

At a basic level, it is government money that is being directed at an activity and right now it has not typically been the activities described within the scope of this research thus far. To be more precise, it includes any government action that lowers the price of production for a company. These most typically include: property tax abatements and other tax breaks, giveaways, funding for “research” and loans at favorable rates (Oil Change International 2013) (Clayton 2011).

Arguably the most controversial of all subsidies are those given to oil companies. Estimates for U.S. oil subsidies range from \$14 billion to \$52 billion annually. This is money that comes from taxpayer dollars. Obama has proposed modest cuts of \$4 billion in oil subsidies that target the “Big Five” oil companies, BP, Exxon, Chevron, Shell, and Conoco Phillips, but all these proposals have not even been voted on in Congress. That is not to say that all members of Congress are for oil company subsidies. There have

been two recent prominent actions proposed that would cut these subsidies, but they have never been passed (Oil Change International 2013)(Clayton 2011).

The first action against oil subsidies was proposed when a Super Committee was formed in 2011 to look for \$1.5 trillion in deficit reduction measures over the next ten years. In an open letter to the Super Committee, 36 democrats proposed to end various fossil fuel subsidies that would save the U.S. government \$122 billion over the next ten years, but unfortunately, eight members on this Super Committee have received sizable contributions from the oil companies in recent years, thus it never passed (Oil Change International 2013).

The second action is the “End Polluter Welfare Act”, sponsored by Bernie Sanders (I-VT) in 2012. In this act, he proposes over \$11.3 billion in cuts to companies working with coal, oil, and natural gas. He states that between 2002 and 2008 that the government has given over \$72 billion in fossil fuel subsidies versus only \$12.2 billion in renewable energy investments. He posits that the government should not be subsidizing polluters (Sanders 2012). Furthermore, the bill proposes that no money made available to the World Bank or other international financial institutions be allowed towards projects involving oil, coal, or natural gas. This act has never been voted on in Congress (Oil Change International 2013).

Estimates range wildly because of different accounting techniques used to get the numbers. Conservative estimates around \$14 billion include only direct losses in tax revenue, while higher estimates include some externalities of the fossil fuel industry. For example, defense expenditures in the Persian Gulf related to the protection of oil

companies. This estimate still does not include any environmental or health costs. Health costs alone are estimated at around \$120 billion a year (Oil Change International 2013).

The excuses government officials give for the subsidies include: job loss, lowered domestic production, and rising gas prices (Oil Change International 2013). The problem with this line of thinking is that several of the larger subsidies are going to foreign oil production (Environmental Law Institute 2009). As well, it has been estimated that gas prices are determined by the world oil market, not domestic production. Furthermore, it is estimated that world oil production would fall by less than one tenth of one percent if Obama's modest oil subsidy cuts were implemented (Krueger 2009).

Alan Krueger, assistant secretary for economic policy and chief economist, also points out that oil subsidies create an inefficiency in the marketplace because it encourages an over investment in the domestic industry. He also addresses how the current policy actually works against reducing negative externalities. For him, the only justification for subsidized tax provisions is if it promotes positive externalities in the production or the consumption (Krueger 2009). It comes back to the title of Bernie Sanders' 2012 bill: "End Polluter Welfare Act" (Sanders 2012). The U.S. government is essentially aiding polluters with taxpayer money. Investment in the oil industry creates a marginal tax rate of 9.2 percent, while the average for other industries is 26.3 percent (Krueger 2009).

If these billions were invested in renewable energy sources, it would not only help to save the American people from dependence on foreign oil, but it would reduce

costs in healthcare and promote environmental sustainability. These companies do not need government subsidies to motivate them to continue in the marketplace. They are profitable even without the subsidies (Clayton 2011). A fledgling solar company may desperately need the same subsidies to make solar products that are affordable to the American people, and the positive externalities associated with this changeover in policy make financial sense. People are not getting sick from the pollution of solar panels, nor does solar energy continue to deplete our remaining fossil fuels. One poll found that 75 percent of Americans favor subsidy cuts for the oil and gas industries (Clayton 2011). The federal government is not listening to its constituents and it represents the Greed in the 4G Syndrome that will eventually lead to further grievances from the American people (Gomes 2013).

While the federal government is doling out billions to oil and gas companies, local governments are wasting millions in subsidies to companies that are not held accountable. Good Jobs First, an organization that fights for quality jobs and runs a subsidy tracker on their website, has done extensive research on the accountability and lack thereof from local governments to businesses. One of their largest projects is an effort to track subsidies given to Wal-Mart, the world's largest retailer.

Wal-Mart has received over \$1 billion in local subsidies ranging from job training funds, sales tax rebates, free or cheap land, tax credits, and infrastructure assistance. The study, performed by Good Jobs First, found that 91 Wal-Mart stores have received such subsidies. These can range from \$1 to \$12 million per store (Good Jobs First 2013) (CNN Money 2004). The promise is that they will be bringing three hundred new jobs to

the area, but is this the case?

Studies have found that the jobs created by the supercenters do not make up for the jobs lost in a community. In fact, for every one job that Wal-Mart creates, it is estimated that it eliminates 1.5 jobs from the local community. When Wal-Mart was growing in Iowa, the state “lost 555 grocery stores, 298 hardware stores, 293 building supply stores, 161 variety shops, 158 women’s clothing stores, and 116 pharmacies” (McKibben 2007: 106). This also results in driving down everyone’s wages in the community, as local businesses must cut costs to stay open and compete with Wal-Mart. Also, with an aim to give the cheapest prices, Wal-Mart has also moved countless American production jobs overseas to sweatshops. University of Pennsylvania researchers found that counties with Wal-Mart were becoming poorer than counties without a Wal-Mart, and the more Wal-Marts a county had, the faster they became poor (McKibben 2007: 106-107).

One study by Democratic staff found that because of Wal-Mart’s failure to pay its employees a living wage, it is costing taxpayers \$5,815 per employee per year (Ungar 2013). This is mainly due to taxpayers having to cover healthcare and food stamp costs of Wal-Mart employees (Ungar 2013) (Good Jobs First 2013). While there are federal laws that require large companies to offer health insurance to full-time employees, there is no penalty when a company’s workers become eligible for government assistance programs (Ungar 2013).

Luckily, some efforts have been started to combat this problem. In California, they are proposing a \$6,000 fine for every full-time employee per year on companies

when worker's become eligible for Medi-Cal, the Californian version of Medicaid. In California it is possible that it could pass because of a democratic super majority in both the House and Senate (Ungar 2012). These efforts are possible in other states, and if the law passes in California, it could become a powerful precedent.

Wal-Mart does offer low prices for its products, but at what cost? As Bill McKibben (2007: 107) states: "Wal-Mart can offer those low prices precisely *because of* the damage it does to communities"(emphasis in original). If there is focus only on individual savings, it would appear that community members benefit from Wal-Mart, but when focusing on the community, the savings begin to disappear. Breaking down the individualistic culture of the United States is a daunting task, and there is no suggestion here that the U.S. has to give it up altogether, but local policy should always focus on the benefit or detriment to the community.

Though these are two prominent subsidy-gone-awry examples, these only begin to scratch the surface of federal and local subsidy policy and accountability. In a recent study from Leigh McIlvaine and Philip Mattera, they looked at 64 different local subsidy programs, and found that only 21 report recipient business names online. Amongst these 21, only 10 disclose the dollar value of the subsidy and only 4 report the jobs that the subsidy created. This leaves most subsidy programs not disclosing pertinent information to its constituents online (McIlvaine 2013: i).

The cities most on track to full disclosure are the following: New York City, New York; Austin, Texas; Memphis, Tennessee; and Chicago, Illinois. Furthermore, this is the third study from Good Jobs First on the subject and disclosure rates are increasing.

When they initially performed the study in 2007 they found only 23 states had company-specific disclosures, today 46 states have some sort of disclosure; however there is still a lot of improvement that needs to be made in local subsidies (McIlvaine 2013: 1).

It is estimated that local subsidies range from \$25 to \$35 billion per year (McIlvaine 2013: 2). Making details of what this money is contributing to in the community is imperative to create engaged and knowledgeable citizens. Several cities have multi-million subsidy packages for businesses, and not all of them are successful. The public has a right to know this information and local policy should permit penalties to hold company's accountable. For example, a study by the Louisiana Coalition for Tax Justice found that in ten years of industrial property tax exemptions, 75 percent of the companies did not create any new jobs and 87 percent went to high polluting industries. Furthermore, it cost the state \$2.5 billion and the school system \$941 million from the lost revenue in taxes (LeRoy 1997: 5). Another example is from Minnesota. They gave a subsidy package to Northwest Airlines worth \$270 million, and shortly after Northwest announced that any new jobs were "on hold". With no legal accountability for these subsidy packages, it is what Greg LeRoy refers to as a "candy store" for these corporations (LeRoy 1997: 1-2).

In the end, these policies are unsustainable and they do not add to the peaceability of communities. Even with accountability, it is not responsible to give subsidy packages to businesses that are polluting our environment. If the United States wants to remain competitive when the fossil fuel inevitably dries up, it should invest money in alternative and sustainable technologies. If this shift is to occur, renewable energy companies and

other sustainable businesses should still be held accountable. Looking at current subsidy policy through the 4G Syndrome, we can begin to see the structural violence that it produces (Gomes 2013).

Growth

Local economies are expected to continually grow their economies and current new jobs for constituents, these are the numbers that matter when campaign time rolls around. For this reason, they feel the need to invest in large, often polluting companies. They are essentially gambling taxpayer money on deals worth millions. There are few legal structures in place to hold the businesses accountable, so often no growth even occurs, but it is the hope for growth that drives these subsidy packages.

Glut

Often these tax subsidies are for certain tax deductions, especially in oil and gas industries. This creates a glut in investment towards certain activities that will provide a larger after-tax revenue and a decrease in investment in activities that do not receive tax subsidies. Since renewable energy receives much less in subsidy money than fossil fuels, we get a glut of investment towards the more polluting activity (Krueger 2009).

Greed

These activities inevitably lead to greed in the system and amongst policymakers. Policymakers choose to subsidize industries that they receive campaign contributions from, making them forget the constituents they are meant to serve. Corporations come

to expect these millions in subsidies and put local cities in competition with each other to get the most money. Since several of these businesses, like Wal-Mart and oil and gas companies, are already mature, profitable businesses they do not actually need the money, but become accustomed to it.

Grievance

Grievance comes from the bottom. The people who lost their quality jobs because a local business shut down after Wal-Mart came to town, or the taxpayer who must pay for the healthcare costs and food stamps for employees of subsidized companies that do not pay a living wage. Even the local governments that are duped by large corporate promises are aggrieved. Grievance could also include the environment, as polluters are incentivized to pollute.

4G Solution

It is not my belief that all subsidies are bad, especially if they are products and companies that intend to stay domestic or they are sustainable, ecological companies. Right now, the installation of solar in a home is expensive, but with subsidy money it could perhaps bring the price down, as more investment would be made in these industries. If the United States directs subsidy policy into a framework similar to my 4G Solution, then the results could be expected to be very different.

Global Equality

In a business sense, this is not likely to happen entirely, but it is possible to direct subsidy policy to at least be more industry-neutral. As Krueger (2009) states:

“Differences in tax treatment across industries give rise to differences in after-tax returns for investments that would otherwise have the same pre-tax returns.” If we no longer favor businesses that give campaign contributions, we can at least have a more equitable business climate. A small business cannot compete with a larger retailer that also receives subsidies. In this sense, there needs to be a sort of business equality. If all businesses were considered equal, then power would not lie with the largest corporations.

Green Principles

This should be foremost in subsidy policy. Any polluter should not be eligible for subsidy packages. If this change could occur, then it would spur more investment in renewable energies. It could also provide an incentive to polluting companies to become more ecological. To further have green principles, subsidy packages should focus on domestic production to stimulate job growth and lower our ecological footprint. Using indicators like HPI and GPI would further incentivize greener practices.

Group Thinking/ Good Governance

Publicly funded elections are a highly debated topic. A recent poll showed that half of Americans are in favor of publicly funded elections that would ban corporate and individual contributions to candidates (Feide 2013). It is my belief that many are skeptical of more government spending because of the irresponsible actions in Washington in recent years, but with publicly funded elections citizens would take back ownership of our government. The scenario where eight people on a Super Committee for reducing the deficit were getting significant contributions from the oil and gas industry would not happen. If government officials were only accountable to the

American people, then they would make subsidy policy that benefited the American people.

Grassroots Growth

If local governments began focusing subsidy packages on local businesses and attempting to create community corporations, benefits would start at a grassroots level. It would stimulate local economies and lead to more long-term quality job growth. Local governments can begin by fully disclosing all subsidy packages including: the company, the amount received, and the jobs created. With more empowered and engaged citizens, cities can also sow more accountability measures for recipients of subsidies.

Conclusion

There are several current initiatives in urban populations that are leading to a more sustainable country. These initiatives should be rewarded with potential subsidy packages that would allow them to expand. Shifting funding towards city-wide composting or local food movements would also create quality jobs in the community.

In terms of local food, San Francisco serves as a model to other cities. Through edible school gardens, restaurants and groceries, they have created an excellent system that is sustainable for their local economy. Initiatives happening in Detroit and Portland should be expanded and local decision makers need to adopt policy that would allow this.

Placemaking events provide an excellent way to rebuild a sense of community, thus promoting a more peaceable society. By organizing more placemaking events around the country, it promotes green principles that are taught for free to participants. This also adds to global equality because everyone has access to this information; however it is important to include sites from all neighborhoods within a city so that everyone can benefit from events like the VBC.

In terms of business practices, the United States could learn a lot from a model like Mondragon. The cooperative business structure can work within a capitalist society, and promote equality at the same time. Taking additional time in setting up and planning a cooperative structure is very important to ensure financial sustainability. Mondragon's largest strength is in the set up of their cooperative collective. Viewing initial investments as debt allows a cooperative to survive even if members leave. More than that, cooperatives are an excellent way to get more participative employees because they are also the owners.

Sustainability incubators also serve as a valuable tool for preparing companies to operate more sustainably. Green Garage in Detroit incorporates TBL into their new businesses, forcing new business owners to consider all the impacts of their business on the community and the environment. Programs like Green Garage would also benefit from local government subsidies.

While there are several excellent examples of sustainable local government practices, it is often overshadowed by negative examples that stem from government subsidies. Places like Green Bay show that government money is better put to use on

community corporations rather than disloyal large corporations.

Most urgently, subsidy policy needs to be addressed at both the federal and local level. It is important that polluters stop receiving money. Subsidy packages should be targeted to newer sustainable businesses rather than mature, profitable fossil fuel companies. Furthermore, accountability measures need to enter into law. Penalties should be issued to companies that fail to live up to their promises.

Urban sustainability initiatives reach millions of people, so it is vital to empower these programs to have the greatest affect. Through the previously mentioned recommendations, it is my hope that local government officials realize the potential and value in these activities. Calculating citywide HPI and GPI will help to address the issue for valuation of these services. With new measurements of progress in urban settings, local governments can begin to turn intrinsic value into economic value and at the same time promote sustainability. GPI and HPI measuring would also ensure that social services like parks and libraries are fully recognized for their value to the community.

Conclusion

By tracing the history of progress it is noticeable that progress did not always equal economic growth, it used to be something deeper than this. Between Plato and Aristotle we get a sense of evolution towards a greater society, but on a more virtuous path than today. Progress did not correlate with riches, though some level of comfort was recognized to be important. It was not until Adam Smith that the world's view of progress began to change, and though many credit him as the father of our current capitalism, he does not foresee the infinite growth that economists think is possible today. Adam Smith saw limits because he saw land as capital. Other economists at this time, like John Stuart Mill and Thomas Robert Malthus, also saw limits to growth. There were warnings that we could not grow forever, yet we ignored them.

When the time came for Keynesian economics the United States was in the Great Depression, unemployment was high and government spending to spur the economy seemed like the answer. During World War II, the United States was a production country, and during this time Simon Kuznets developed GDP as a way to measure production of a country. He also warned that it was hardly a measure for well-being, yet we ignored him. GDP is now the main indicator for the progress of a nation when progress is viewed as a gradual betterment tied to economic growth. After World War II, the country was booming, unemployment was low, GDP was increasing, and all seemed right with Keynesian economics.

In the 1970s stagflation struck. In a period of both high unemployment and high inflation, economists began looking for a different economic model. From this period,

new classical macroeconomics was born. It has an ideology in rationality of an individual and does not account for corporate greed. Its basic premise is that during economic downturns the government should not aim to stabilize the economy through government spending, but rather companies should be able to pay their workers less under the premise that when the economy turns around the company will pay them more. Also, unemployment is never voluntary, everyone makes a choice between being unemployed or taking a job that is perhaps lower than their expectations. While new classical economics may seem rational it is hardly realistic in today's corporate climate. It could only be beneficial and logical in a cooperative business structure.

High government spending and trusting corporation's rationality are the economic models we have to choose between, but it is obvious from my research that there can be a different way. Both these models assume that continual economic growth is a good thing. My initial interest in this research was to determine if continual economic growth was actually a good thing. Growing up with my father's job dependent on Detroit's economy and then seeing it collapse left me wondering what went wrong.

In the course of this paper I have found that chasing economic growth and tethering our society's progress to rising GDP numbers is what went wrong. GDP is an insufficient and unsustainable way to measure any conceptualization of progress. Since it only adds up revenues, expenses, assets, and liabilities and subtracts nothing, it can hardly be a good measure of anything except economic activity. Money spent on oil spills, crime, car accidents, obesity-related diseases, pollution and natural disasters do not mean the country is having a "good" year. If an earthquake devastated the state of

California, ruining all infrastructure, it is quite possible that trillions could be spent to restore it and our GDP would skyrocket. What exactly is progress about that? It is my contention that it is not progress.

In my findings I found that first we need to ask ourselves: “What do we want out of life?” The answer is typically not money. It is most often happiness, love and health. From this point, finding a way to measure these things should be our ultimate goal. This allows our governments to assess if we are achieving our true aspirations. By thoroughly examining several alternative indicators of progress I found that HPI and GPI used in conjunction with each other reveals an accurate picture of a new progress. Reconceptualizing progress to be sustainable qualitative improvement provides HPI and GPI the platform to takeover GDP as a measurement. These two indicators have several strengths that should be considered in all alternative indicators.

HPI’s strength lies in its simplicity but also in a country’s inability to “export” pollution through its use of ecological footprint. The concept of HPI is simple, it determines how efficiently a country is delivering well-being to its citizens. The goal is to have more “happy life years” for citizens, but it gives consideration to the environment. The United States ranks low on this list. From this information I believe other researchers and policymakers could determine an HPI for various cities. This would allow a more accurate picture of what cities are doing things right, and from this policy change and local goals could be shifted to focus on raising HPI.

GPI can provide an even more accurate picture of the sustainable qualitative growth in a city, but it has several components that can make it confusing. Its strength is

in its total value system that gives a value to nature, household work and volunteering. Using it in conjunction with HPI would give a mix of simplicity and various indicators that can determine a level of well-being and then the specific areas we need to work on. The implication here is that these two indicators count what is important and what adds real wealth into our lives.

Beyond the limitations of GDP and the need for alternative indicators, I found that the idea of continual economic growth is flawed. We live on a finite planet and growth cannot go on infinitely. Several economists have taken note of this, making recommendations for what needs to change in policy. It is my recommendation that the best course of action for our future would be to move towards a steady-state economy focused on localizing the economy; therefore, moving sustainability activities to the forefront of policy. This may involve a period of degrowth, but the goal should be to enter a steady or no-growth state. This would free up governments and consumers from the chains that we must always be growing. While growth may be necessary for some developing countries, the United States has grown enough and should work to reduce its consumption so that other countries may get a more sustainable level of prosperity. It should be noted that the growth in these countries should be focused on sustainable qualitative improvement, not primarily economic growth.

There are numerous sustainability activities already happening within the United States. From the countryside to the cities, people have begun several initiatives towards my reconceptualization of progress. This research aims to focus on activities that fit my reconceptualization of progress, rather than simply diagnosing problems. By looking at

each of these activities, I was able to uncover the various components of each that contributes to peaceability and sustainability. Determining this can help in true sustainable development projects as well as pinpoint what improvements should be made in existing sustainable development projects.

Throughout my research of rural and urban movements, I found overwhelmingly that they contributed to peaceability in their communities. Through using my 4G Solution, I was able to create an analytical framework through which I could examine these various movements socially, ecologically, and economically. Factors that most contributed to global equality were the following: low barriers to entry, inclusion of all income-levels, races, and neighborhoods, education extending to participants outside of the movement, and empowerment of all members. Lost Valley has exemplified this amongst rural sustainability movements, the VBC is well on its way in urban movements along with urban farming initiatives and school garden projects, and Mondragon serves as an excellent business example of this.

Characteristics that most emulated green principles included: passive solar techniques, localizing food production and economies, greywater systems that repurpose current “wastewater”, and permaculture, which creates a long-term sustainable agricultural system while working with nature rather than against it. Rural sustainability movements have excelled in their green principles. Findhorn and Cobb Hill are excellent examples of localizing food production and furthermore, Findhorn is a model for localizing their economy through on-site cooperatives and a local currency. San Francisco serves as a prime example of how a city can utilize green principles and be

thriving. Through their local food movement and with champions like Alice Waters, they are ahead of the curve in sustainability. Other urban areas like Detroit and Portland are taking the opportunity to implement green principles through urban farming and citywide composting.

Good governance and group thinking techniques depend largely on the community. What may work in one place may not be the best option for another. It is important for a community to decide which model provides best for what they are looking for in a structural setup within an activity or a management system within a business. Features that provide exemplary examples of good governance and group thinking are as follows: deep democracy as shown by Findhorn, a sociocracy similar to Lost Valley, the participative management structure and financial stability as created by Mondragon cooperative, sustainability incubators that work with new businesses to implement TBL accounting practices, and local governments like San Francisco and Portland that are open to changing local laws towards more sustainability. Currently, I find the most transferability in the Mondragon corporate structure because it provides stability even within a country still chasing economic growth. It would allow a business entity to weather the storm when the inevitable transfer to a no growth economy occurs. Though sustainability incubators are doing valuable work to create new sustainable businesses outside of the cooperative business structure.

Grassroots growth infers that if growth is to be part of the equation, it must come from a grassroots level. This does not transfer to economic growth, rather it is more about the growth in these various activities coming from the bottom, not the top. Raising

awareness at the bottom and getting this level involved will allow for growth to happen more naturally and for these movements to spread. What began with Alice Waters and Bi-Rite became citywide participation in the local food movement; this is grassroots growth because it is now part of the culture of San Francisco. Other examples of grassroots growth include: the set up of Mondragon, which allowed for the cooperative collective growth they have achieved, urban farming by citizens wanting to transform abandoned lots, the VBC, which includes more sites every year and draws people from outside of Portland to come and volunteer and learn, and permaculture, a more literal grassroots growth that works with nature and expands and becomes more productive every year.

Knowing what activities to focus our attention on and why these activities lead to a peaceable society is not enough. This research is only useful if it is used with HPI and GPI measuring techniques within local governments to assess my reconceptualization of progress in these activities versus other development activities. For businesses, they should be adopting a TBL framework to account for all the costs of their activities and receiving a truer picture of how sustainably they are running their business for the long-term. If GPI and HPI were considered for evaluating social services within a city, there would be no reason to cut funding for things like libraries or parks because they very efficiently deliver well-being and a higher quality of life for their citizens at an extremely reasonable rate.

As well, local governments need to reassess their subsidy policy to ensure that subsidies given by local governments provide an increase in HPI and GPI for that city.

As it stands, billions of dollars of taxpayer money is being wasted on subsidies that not only provide little long-term economic benefit for the community, but may actually be decreasing the HPI and GPI of the city. First and foremost, polluters should not be able to receive any subsidy money. It is not my intention that subsidies be given to only green initiatives, rather no company should be rewarded for harming the environment. Furthermore, there needs to be more accountability when subsidies are given to companies and these must be published for public viewing online. If a company receives hard-earned taxpayer money, they should have to justify their reason for receiving it in terms of quality job creation. There must also be measures to penalize companies that do not live up to the promises made to a community. It is important that these be implemented at a national-level to even the playing field for local communities.

My hope is that with this research, sustainability projects that have been taken for granted or overlooked by communities and governments will be recognized for their great successes with a new concept and measure for progress. I would further hope that this could lead to policy change in local communities that would expand these activities or at the very least be a source that empowers citizens to focus on these sustainability activities despite policy.

There is no single pathway into the future. This research could not possibly cover every sustainability activity that exists nor does it claim to provide a universal recipe for peaceability and sustainability. This research acts as a guide to create new projects and improve existing ones. Furthermore, it pinpoints various components that are integral in making a peaceable society. Each community must ask itself what their needs are and

move forward with these measurement tools to assess the progress of their needs.

My hope for future research would be to further explore the transferability of this research in other communities through experiential research. With the capability to actually create an HPI and GPI for a local community and then be able to evaluate projects would be a very telling experience. To start a community garden or sustainability activity with the knowledge I have gained during this research would give me hands-on experience in creating the various aspects of the 4G Solution.

Other areas of practical research that I would like to pursue would be in the business field, by creating and implementing a sustainable peace business model. It would be my dream to be part of organizing a worker-owned cooperative in the same manner as Mondragon began. This would allow me to further the field of peace business as well as add to my local communities ability to realize the 4G Solution. On top of that, it would give me real world knowledge of successes and failures in transferability of ideas from existing cooperatives.

To further my qualitative research I would hope to delve deeper into public policy, finding the roots of the problems we face today in our local policies. The areas to explore are endless and would provide a larger understanding of how we can rehabilitate public policy to work for citizens and not large corporations. Exploring more ideas for tax incentives for sustainable activities and tax penalties for polluting activities would be difficult with our current power structure, but change must happen from a grassroots level, so I feel this research would not be in vain.

In conclusion, this research has shown that for every polluting activity, there is a more sustainable activity to replace it. Focusing on what is going right in the world and looking for any way to expand these activities is a worthwhile goal. It is still my belief that this reconceptualization of progress and a focus on sustainability activities can be more beneficial to a local community than economic growth. In fact, I found that economic growth can hinder progress and these activities. New systems of measurement must become more widely accepted by our government and shown on our media. More than that, individuals must articulate what they really want out of life and pursue activities that achieve it, albeit in a sustainable way. The United States must begin measuring what is important and worthwhile. While change cannot happen overnight it can begin tomorrow.

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