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Editor’s Note

It is with great pleasure that we are able to publish Volume Twelve of Oeconomicus for the 2011-2012 academic year. As Oeconomicus continues in its second decade of publication, it is safe to say that the ideas contained herein are as creative and robust as ever; something that should make the previous editors and individuals who worked on the journal as proud as ever. There are many people who deserve thanks.

To begin, the editors would like to express their gracious appreciation to all the authors who submitted papers for this year’s edition of Oeconomicus. The selection process was extremely competitive which resulted in a journal of high academic quality.

Next, the editors would like to express the sincerest gratitude to the individuals who served as anonymous referees for this issue. These people, in no particular order, would be Alex Binder, Mitch Green, Payam Sharifi, and Daniel Urban.

Third, we would like to thank FedEx Office, the publishers, and the Economics Club for their contributions and flexibility in helping meet the journal’s needs so as to bring these ideas to you. So sit back, put your feet up, and enjoy reading some of the new heterodox economic ideas.

The Editors,
Avraham I. Baranes
Devin Rafferty
Institutional Economics and Catholic Social Teaching: Changing the Mainstream’s Theory of Labor

By: Alex Binder
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Institutional economics and Catholic Social Teaching, a subdivision of Social economics, are both considered to be a part of Heterodox economics for they both have many disagreements with the mainstream or Orthodox body of thought. One of these disagreements revolves around labor within the market system. Both Institutional Economics and Catholic Social Teaching have much in common in regards to their views on labor, including their disdain for the commoditization of labor within the market economy, but also in regarding work as fundamental to the nature of man. The two heterodox bodies of thought, however, employ different analytical frameworks resulting in a few divergences. Drawing from works on labor and the market system by Thorstein Veblen and Karl Polanyi and from key papal encyclicals on the same, I intend to show that despite the difference in preferred analytical frameworks, commonalities may enable proponents of Catholic Social Teaching and Institutional economics to work together to reform the mainstream’s theory of labor.

Thorstein Veblen, an American economist and leading thinker of Institutional economics, saw labor in a much different light than the classical and neo-classical economists who generally regarded labor as irksome. To them, workers faced a tradeoff or choice between work and leisure and the going wage was the price necessary to induce workers to sell their labor. Indeed, the mainstream economists of the neo-classical tradition still view labor this way. Veblen’s evolutionary analytical framework on the nature of man and the history of economics produced a much different picture of labor.
Veblen’s thoughts on labor are covered most extensively in his 1898 article “The Instinct of Workmanship and the Irksomeness of Labor.” He notes that popular economic theory took it as commonplace that work was irksome; that “men desire above all things to get the goods produced by labor and to avoid the labor by which the goods are produced” (Veblen 1898, p. 187). Veblen observes, however, that in no other species is a consistent aversion to the activity that goes to maintain the life of the species found. No species would survive for long if possessed of such an instinct. He also notes that this same economic theory does not regard other useful efforts which bring gain to man (such as war, sports, or politics) as irksome. He concludes “this alien propensity (labor as irksome) must have been intruded into his make-up by some malevolent deus ex machina” (Veblen 1898, p. 187).

In order to analyze this proposition made by popular economic theory, Veblen starts with a look at the nature of man. He notes that man is like other animals in that he acts in response to stimuli in his environment. He is a creature of habit and propensity, but he is also an intelligent agent capable of appreciating the trend of these habits and propensities. Man is also endowed with a proclivity to purposeful action; he seeks to accomplish some concrete or objective end through his work or effort. Futility of life is very distasteful to him. As Veblen writes, “[Men] like to see others spend their life to some purpose, and they like to reflect that their own life is of some use” (Veblen 1898, p. 189). Man’s advantage over other species is his ability “to turn the forces of the environment to his account” (Veblen 1898, p. 189). His primacy is primarily an industrial one.

Taking this as the core of the nature of man, Veblen observes that this contradicts the proposition of man’s aversion to labor. His answer to this seeming contradiction: the aversion is conventional only. It is possible only when man has distanced all its competitors, when
starvation is no longer a major concern for at least part of the group. Veblen also responds to those who say that the instinct to sportsmanship or war is prior to workmanship. He notes that there is considerable evidence from history and from present-day phenomena against this conventional view, which begs the question: “How has [the convention of the irksomeness of labor] arisen and gained consistency in spite of its being at variance with [the instinct of workmanship]?” (Veblen 1898, p. 190).

To answer this question, Veblen continues his analysis of man by saying “man’s life is activity…he acts under the guidance of propensities which have been imposed upon him by the process of selection to which he owes his differentiation from other species” (Veblen 1898, p. 192-193) He notes that man is a peaceful animal often preferring to avoid conflict with competitors. Man is useless without tools and was non-predatory and non-formidable until he had made considerable advances in warlike tools. It is here, in the development of tools or implements, where man is able to adopt a more predatory habit. “Self-interest, as an accepted guide of action, is possible only as the concomitant of a predatory life, and a predator life is possible only after the use of tools has developed so far as to leave a large surplus of product over what is required for the sustenance of the producers” (Veblen 1898, p. 194).

Extending further the concept of habit to support his argument, Veblen notes that what men can do easily is what they do habitually. Habits become acquired proclivities through the selective elimination of the individuals who do not consent with the thinking or action of the group. The longer this goes on, the more solidly the proclivity is imprinted on the group. In this way, the instinct of workmanship slowly becomes the irksomeness of labor.

Men are also sensitive to others’ approbation. Early on, men evaluated each other in regard to their efficiency or expediency, but as industrial tools and the pecuniary arts developed
their evaluation gave way to capacity of force or power. Also early on, “notions of economic rank… are almost, if not altogether, in abeyance” (Veblen 1898, p. 198); but “as the industrial efficiency of the group increases, and as weapons are brought to greater perfection, the incentives to aggression and the opportunities for achievement along this line increase” (Veblen 1898, 198-199). Employments of exploit and class distinctions emerge. Honorable men must show excellence with predatory exploits and avoid industrial occupations altogether. These occupations fall to those without predatory capabilities, notably to women, of whom Veblen discusses further in his 1899 article “The Barbarian Status of Women.”

Veblen later continues: “Where the predatory culture has developed in full consistency, the common-sense apprehension that labor is ignoble has developed into the further refinement that labor is wrong” (Veblen 1898, p. 200). Labor becomes a mark of inferiority and is associated with poverty. Indeed, Veblen believed that to be the situation at the end of the 19th century and the beginning of the 20th century.

To summarize his argument, Veblen writes: “The irksomeness of labor is a spiritual fact; it lies in the indignity of the thing. Physical irksomeness and distastefulness can be borne, if only the spiritual incentive is present.” There is no remedy for this cultural fact, but Veblen notes that appeal may be made to set aside the conventional aversion to labor, though he doesn’t believe it will do much unless the cultural structure upon which this fact rests is overturned.

Veblen elucidates further on the nature of man and labor in his “On the Nature of Capital”. In response to the individualistic, hedonistic theories of production dominating the economic mainstream, Veblen adds to his proposition that man is a social animal:

Now, whatever may or may not be true for human conduct in some other bearing, in the economic respect man has never lived an isolated, self-sufficient life as an individual, either actually or potentially. Humanly speaking, such a thing is
impossible. Neither an individual person nor a single household, nor a single line of descent, can maintain its life in isolation. Economically, speaking, this is the characteristic trait of humanity that separates mankind from the other animals. (Veblen 1908, p. 517-518)

Veblen then goes on to describe the position of labor within Capitalist regimes, which he called the machine process. He notes that the process of accumulation of wealth requires gains made from advantageous bargaining that primarily comes from the bargaining between the owners of industrial wealth and those who work to turn that wealth into productive industry, i.e., between the capitalists and the workers. Because the capitalist is often an expert of business and not of industry, he relies on skilled workers who understand the complex immaterial technological equipment, and it is with these workers that his bargains are made for hire. Workers who do not possess at least some level of mastery are not hired. Indeed, the common laborer is not unskilled, but is “a highly trained and widely proficient workman when contrasted with the conceivable human blank supposed to have drawn on the community for nothing but his physique” (Veblen 1908, p. 536).

It is in the hands of these common laborers that the capital goods become means of production. The more proficient the workmen and the more capable the facilities of capital goods, the more productive will be the means of production. The cost to the owner of the capital goods is the wage paid to these laborers. In sum, Veblen believed labor to be an indispensable factor of the machine process, and every bit as important as the capital goods with which man works to produce things.

Another heterodox economist, Karl Polanyi, adds to what may be regarded as the Institutional view of labor with his book *The Great Transformation*, an analysis of the rise of the market economy. Polanyi’s writings are also of a historical and evolutionary character. In
Chapter 6, Polanyi explains the rise of the idea of the self-regulating market and the inclusion of land, labor, and money within these markets. Polanyi notes that a market economy is an economic system regulated by market prices that expects human beings to behave in such a way as to maximize monetary gain, assumes the presence of money, and assumes markets in which the supply of goods and services will equal the demand for those goods and services at a definite price. Under this system, order in distribution and production are ensured by prices. Because land, labor, and money are elements of industry, they are implied to have markets of their own set by wages, rents, and interest, respectively.

The rise of the free market, or self-regulating market, came with the rise of liberalism and the decline of mercantilism and feudalism. Labor markets replaced the old craft guilds with its system of masters, apprentices, journeymen, and custom or tradition ruled wages. Since “a market economy can exist only in a market society” and “a market economy must comprise all elements of industry, including labor, land, and money” (Polanyi 1944, p. 74) they all became commoditized and subject to the regulation of the market alone. Yet, as Polanyi observes, “to include them in the market mechanism means to subordinate the substance of society itself to the laws of the market” (Polanyi 1944, p. 75). He continues, “labor, land, and money are obviously not commodities…labor is only another name for a human activity which goes with life itself, which in its turn is not produced for sale but for entirely different reason, nor can that activity be detached from the rest of life, be stored, or mobilized.” (Polanyi 1944, p. 75).

With condemnation of the market system, Polanyi adds:

To allow the market mechanism to be sole director of the fate of human beings and their natural environment, indeed, even of the amount and use of purchasing power, would result in the demotion of society. For the alleged commodity “labor power” cannot be shoved about, used indiscriminately, or even left unused, without affecting also the human individual who happens to be the bearer of this peculiar commodity. In disposing of a man’s labor power the system would,
incidentally, dispose of the physical, psychological, and moral entity “man” attached to that tag. Robbed of the protective covering of cultural institutions, human beings would perish from the effects of social exposure, they would die as the victims of acute social dislocation through vice, perversion, crime, and starvation…no society could stand the effects of such a system of crude fictions ever for the shortest stretch of time unless its human and natural substance as well as its business organization was protected against the ravages of this satanic mill.” (Polanyi 1944, p. 76-77)

Polanyi continues his analysis of the position of labor in a market system in chapter 14 entitled “Market and Man.” Separating labor from other activities of life destroyed the organic forms of existence and replaced them with an individualistic type of organization. The destruction came about by forcing laborers to work through the freedom of contract and the motive of hunger, evident in the colonies of the 18th and 19th centuries. As Polanyi writes, “although it was acknowledged that there existed a customary standard below which no laborer’s wages could sink, this limitation was thought to become effective only if the laborer was reduced to the choice of being left without food” (Polanyi 1944, p. 172).

Because men were completely subject to the whims of the labor market it wasn’t for them to decide where they should work, what they should do, how they should do it, or at what wage they would work. The aim of the social protections that emerged as a result of this commoditization was to provide a minimum standard of humanity, “to safeguard the human character of the alleged commodity” (Polanyi 1944, p. 186).

From an Institutional or Evolutionary perspective then, work is an activity central to human life that has been commoditized in the market system. It has an instinctive character both to provide for the survival of the species, which is inherently social because of the dependence of men on each other for survival, and for the sense of the merit of efficiency or serviceability to the community. Exploitation, commoditization, and the irksomeness of labor come about in an
advanced society where at least some of the members are not subject to the dangers of hunger and are therefore able to exercise their power over the inferior members of the group. These pecuniary elements have distorted the instinct of workmanship and thus the original meaning and value of work.

The Catholic Social Thought (CST) view of labor also centers on the nature of man. According to CST, man is created in the image and likeness of God, the Creator and is placed in the visible world to subdue it, or in other words, to work. It is his work that distinguishes man from the rest of creatures. As Pope John Paul II puts it, “Only man is capable of work, and only man works” (Pope John Paul II 1981, pp. Intro).

CST defines work as “any activity by man, whether manual or intellectual, whatever its nature or circumstances” (Pope John Paul II 1981, pp. Intro). As we will see, it is also both a right and a duty, personal and social, and has subjective and objective elements.

Pope John Paul II turned specifically to the concept of work in his encyclical “Laborem Exercens” to examine its meaning including the task of uncovering its new meanings in the context of societal developments. The Catholic understanding of work is rooted in the book of Genesis. It is in this source where man is said to be made in the image of God, including partly through the mandate to subdue the earth. Through this mandate given by God, humans reflect the creative action of God by directing their activities toward dominion over external objects. This process of subduing the earth is universal and takes place within each human being.

The irksomeness of labor described by mainstream economists is what CST refers to as the toil of work. This toil that accompanies much of our work is a result of breaking the original covenant with God, but it does not alter the fact that work is a good thing for man. It is good because it is useful and often times enjoyable, but most importantly because it expresses man’s
dignity and increases it. Through work, man transforms nature and achieves fulfillment as a human being. Work enables man to increase the virtue of industriousness, which enables a man to become “more a human being” for “virtue is something whereby man becomes good as man” (Pope John Paul II 1981, pp. 9).

Work is not just a good for man, but also a duty. It is an obligation on the part of man because “the Creator has commanded it” (Pope John Paul II 1981, pp. 16), and because of the necessity to obtain the means of subsistence. Work is a foundation for the formation of family life, a natural right and vocation for man, for it is through his work that man obtains the means required to found and maintain a family. It is also intimately connected with education, for the main purpose of education is identical to that of work: to fulfill one’s humanity. Indeed, it may be described as the intellectual side of work.

Because the family is the basic unit of society, work also “concerns the great society to which man belongs” (Pope John Paul II 1981, pp. 10). Man must work out of regard for the entire society “since he is the heir to the work of generations and at the same time a sharer in building the future of those who will come after him in the succession of history” (Pope John Paul II 1981, pp. 16). Work is personal because it is how man expresses and fulfills himself but it is also social because it is the primary means of obtaining the necessities to provide for one’s family and the entire society. These elements constitute the moral rights and obligations of work.

Work may also be understood in an objective and subjective sense. The goods that men produce and the technology that they develop to help them produce more things are the objective aims of work. The capital goods and technology facilitate and accelerate his work, but may become an enemy if they supplant his incentive to creativity and responsibility. In some cases,
the technology replaces the worker altogether and makes man, who is always the subject of work, the slave of the machine.

Persons are the subjects of work, as Pope John Paul II writes, “as a person he works, he performs various actions belonging to the work process; independently of their objective content, these actions must all serve to realize his humanity, to fulfill the calling to be a person that is his by reason of his very humanity” (Pope John Paul II 1981, pp. 6). The subjective sense of work must always be primary to the objective sense of work because the purpose of work is man: “work is for man and not man for work” (Pope John Paul II 1981, pp. 6).

In opposition to this view of work, the modern trends of materialism and economism have treated work as a sort of merchandise. This error of treating man as a mere means of production or a commodity to be bought and sold distorts the purpose of work and subordinates the subject of work to the object of work. It is a separation of means and ends.

Pope John Paul II adds to his analysis on work in the encyclical “Centesimus Annus” in which he observes that work has become increasingly important as a factor of wealth and that the interconnectedness of the labor process has grown substantially since the end of the 19th century making it more and more “a matter of doing something for someone else” (Pope John Paul II 1991, pp. 31). He also observed that alienation, a reversal of means and ends as defined by CST in its most general sense, is rampant in today’s society of consumerism because labor is often organized “so as to ensure maximum returns and profits with no concern whether the worker, grows or diminishes as a person…in which he is considered only a means and not an end” (Pope John Paul II 1991, pp. 41).

More recently, Pope Benedict XVI noted in “Caritas in Veritate” that poverty often results “from a violation of the dignity of human work, either because work opportunities are
limited or because a low value is put on work and the rights that flow from it, especially the right to a just wage and to the personal security of the worker and his or her family” (Pope Benedict XVI 2009, pp. 63). He called for a greater effort to provide decent work for all members of society the characteristics of which are that it is freely chosen, expresses the dignity of man, develops the community, is free from discrimination, enables the provision of the physical needs of one’s family and all of society, permits the workers to organize freely, and to receive a decent standard of living upon retirement.

From these brief analyses of the two modes of thought on labor, we see that there is much in common. Both regard work as fundamental to the nature of man, one stating that it is an instinct or simply another name for a human activity that comes with life itself and the other stating it as any activity by man whereby man fulfills himself as a person. Work also has a social aspect in both modes. To Institutionalists, work is social because man is a social being, never living in isolation and it is by the work of man that the society maintains and recreates itself. CST views labor as social in much the same way: It is necessary for the obtaining of the means of survival for one’s family and all of society and it is also intimately connected with education, a familial and societal obligation.

Both modes of thought also view labor as a good. Veblen believed that man instinctively desires a purposeful life that is good or useful to the society and also desires to be considered efficient or expedient by his peers. Man finds joy in his work because it fulfills these desires. Catholic Social Thought also views labor as a good because it is useful and enjoyable, but also because it expresses the dignity of man and increases it. It is the primary means by which man increases his virtue and becomes more fully human.
Both also saw the modern exploitation and commoditization of labor as a result of the machines process. Veblen believed that such a state could only occur when men had made many advances in the use of tools and had distanced the immediacy of starvation. Polanyi then observed that upon the development of the free market economy, labor was turned into a commodity to be bought and sold, something Polanyi believed was the subordination of the substance of society to the laws of the market. The developments that allowed some to be distanced from the threat of starvation enabled them to use their power to coerce those below them to offer their work for sale only by threat of starvation.

In much the same way, CST believed that in a market economy, the laborer was made a slave of the machine or owner of the machine; or, in other words, the subjective sense of labor was subordinated to the objective sense of labor. It is this treating of man as a means and not an end that CST refers to as alienation. The true purpose of work, the fulfillment of man, is subordinated to the desire for maximum profit, something that is very prevalent in a free market society.

Yet, it is also clear that the two modes of thought differ on the topic of labor. The biggest difference is their preferred analytical framework. Institutional economics prefers to approach the understanding of phenomena from an evolutionary analysis of institutions. It seeks to explain things in a causal sequence that is free from absolute beginnings or ends. Its key influences in this domain are Darwin and the pragmatists of the 19th and 20th centuries. CST on the other hand approaches phenomena from a different general conceptual scheme (GCS)\(^1\), or metaphysical framework. In this framework, everything on earth centers on man and his absolute end: eternal communion with God, the Creator. Every action and phenomena on earth must be evaluated as to

\(^1\) As found in Meador (2007)
its value in obtaining this supernatural end. In contrast, Institutional economics values things or actions based on the concept of instrumental value, which may be loosely defined as the non-invidious recreation or continuity of the life process. As a result, CST views the purpose of labor as primarily of supernatural value, whereas Institutional economics views the purpose of labor as primarily of natural or instrumental value.

The two modes of thought also differ on the cause of the irksomeness of labor. Institutional economics believes that the irksomeness of labor is a spiritual fact, made possible only when man has distanced all competitors or when starvation is no longer an immediate threat to at least some of the society’s members. The aversion to labor is a conventional aversion that is contrary to the instinct of workmanship. It is associated with poverty and inferiority and is avoided because of the indignity of the thing. In the self-regulating market, it is sold largely because the buyers threaten the laborers with starvation.

CST believes that the irksomeness of labor resulted from the breaking of the original covenant made with God, or what Catholics call ‘original sin.’ The story told is that of Adam and Eve eating fruit from the tree of knowledge at the center of the Garden of Eden because they were fooled into wanting to be like God, that is, in preferring self to God. This self-preference, present in all human beings² because of original sin, is the reason for man’s inclination to sin. A direct result of this breaking of the original covenant with God was banishment from the Garden which meant that man must earn his means of survival through his toil or the sweat of his brow. The toil or irksomeness of work is a result of sin and not of conventional habit, but one could argue the two views are not completely incommensurate as proponents of CST may argue that

² Except for Jesus, the Son of God who was both God and Man, and his mother Mary. Catholic tradition holds that both were conceived without sin and remained sinless throughout their lives.
sin is the reason for the evolutionary development of the exploitation of labor and its association with poverty.

In conclusion, Institutional economics and Catholic Social Teaching have much in common with regards to their views on labor. Both modes of thought are considered to be on the outside of mainstream economic thought and disagree with the neo-classical tradition’s view on labor. Both regard work as fundamental to the nature of man, and express concern and disgust over the commoditization of labor in the market economy. The two bodies of doctrine, however, do not agree on the reason for the irksomeness of labor, nor on the proper analytical framework for studying labor or economic phenomena in general. It is interesting that despite this immense difference in philosophy they still reach similar conclusions regarding the nature of man and the role of work. Institutional economics and CST may be incompatible philosophically, but shared goals and concepts may enable the two to work together to change the mainstream’s hedonistic, pecuniary views of labor.

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The Political Economics of John Maynard Keynes

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Abstract: In contrast to many conventional economists who view economy as a set of relationships independent of any larger society Keynes saw the economy as embedded in larger society. This paper focuses on social issues addressed by Keynes in his works. It covers how Keynes perceived capitalism, what were the pressing social issues promoted by capitalism, and how did he go about his recommendations for dealing with these. In such an examination Keynes’s economics in relation to larger social concerns he had is discussed. The overall objective of the paper is to focus on Keynes’s political position, his insight into social policy issues and his social theories and try to reach a conclusion if he was a consensus theorist.

I. Introduction

Keynes was a dynamic thinker; in addition to his economic writings he also addressed the larger social-issues in question. In contrast to the conventional economists who view the economy as a set of relationships independent of any larger society; he saw the economy as embedded in larger society. Keynes did not see economy as a separate entity and it was essential to take into account the non-economic factors in order to formulate economic policies. The non-economic factors were not just the goals of economic analysis but also provided the starting point of his analysis. Keynes believed that the economic problem was subordinate to “life and human relations, to creation and religion” (Fitzgibbons 1988; p.43). Keynes thought the world would become a happy place only when class and international wars have been brought to an end. The economics he developed, known more appropriately as “political economy”, was subordinate to politics and aimed at resolving practical problems (Gilles 2007, p.80).

3 Henry (2001, p.634) argues that “Keynes was an embedded economist: institutions and social relations not only mattered, they had to be understood and their relation to economic activity had to be included in the theoretician’s analysis”.

4 Henry (2001, p.634) argues that “Keynes was an embedded economist: institutions and social relations not only mattered, they had to be understood and their relation to economic activity had to be included in the theoretician’s analysis”.
This paper will focus on social issues addressed by Keynes in his works. It will cover how he perceived capitalism, what were the pressing social issues promoted by capitalism, and how did he go about his recommendations for dealing with these. The main objective is to try to develop a position on his policy advice and recommendations that speak to society, pointing out problems he perceived as affecting a capitalist society. This paper will also incorporate the corrective measures he suggested. In such an examination, it becomes necessary to bring in his economics in relation to larger social concerns he had. The overall objective of the paper is to focus on Keynes’s position on political issues, his insight into social policy issues and his social theories and try to reach a conclusion if he was a consensus\textsuperscript{5} theorist.

The second section of the paper will discuss the diverse and contradictory interpretations regarding Keynes’s political position. This section will also link how Keynes related his economics and politics and try to show how he favors capitalism to socialism despite sharing some commonalities with the socialist side. How he expressed sympathy towards the elite class in his works will also be presented\textsuperscript{6}. Unlike Keynes's own model, the socialist models were directed towards planning for the achievement of distributional justice. The third section will discuss the problems Keynes identified within capitalism and the policy recommendations he suggested to correct the problems. This section will also make clear how Keynes’s redistribution and intervention policies are different from the socialist policies. The fourth section will discuss different positions that support Keynes’s consensus view. And the last section will conclude the paper trying to establish Keynes as a consensus theorist whose main purpose was to save capitalism from its own faults.

\textbf{II. Keynes and his Politics}

\textsuperscript{5} A theory which sees the problems of capitalism as reconcilable and hence believes capitalism is the end of the history. If the fundamental problems are reconcilable, it implies that there’s a fundamental harmony of interests within society. Hence, perceived problems are caused by “outside” forces—misunderstandings, corruption, etc.

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Keynes’s political positions have been subjected to very diverse and contradictory interpretations. Keynes political theory was based entirely on ethics. He revised traditional political philosophy in the light of modern economic growth or transformation of the economy. He declared this to be the most significant change that civilization had ever experienced. Keynes’s political thought was nourished by many sources. He developed his political theories long before his economics, and the principles of his economics reflected his politics rather than the other way around.

Keynes’s theory and principles combined political inequality with economic equality, because he did not believe in the political superiority of power. He recognized that there was a struggle between capital and labor, but he did not think that anything conclusive or good was to be gained from it. Keynes rejected the political ideology that considered superiority of power in favor of one that considered human ideals as superior to power (Fitzgibbons 1988, p.187). He did not advocate the rule of a social class, but he advocated the rule of truth and ideas. He objected to materialism of all kinds because it failed to appreciate the epistemological priority of ideas. He also objected to religious doctrine such as Christianity and ideological doctrine such as communism because both of them failed to appreciate the fact or significance of the inequality of powers of insight, creativity and reason. He often expressed his political elitism in favor of his own upper middle class.

Although Keynes is almost always described as a liberal, there is a big disagreement as to what sort of liberal he was. Laissez-faire stands for negative liberty from government; socialism stands for positive liberty from economic oppression. Keynes did not opt for the former rather than the latter idea of liberty, but he accepted neither version

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7 A theory which sees the problems of capitalism as reconcilable and hence believes capitalism is the end of the history. If the fundamental problems are reconcilable, it implies that there’s a fundamental harmony of interests within society. Hence, perceived problems are caused by “outside” forces—misunderstandings, corruption, etc.
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of liberty as absolute. Keynes believed that conflicting principles of *laissez-faire* and socialism could only be resolved by a higher principle applied according to the circumstances. For example, Keynes’s *General Theory* (1936) qualified government intervention as a good principle as long as it was used in the interests of full employment. Though Keynes’s foundation was based on the doctrines of classical liberalism he was open to government intervention as a pragmatic means to attain his broader goals 11. Nevertheless, collective action of any sort was not his basic principle.

Though Keynes was a reformed capitalist he was distinctively an anti-socialist in his ethical or political beliefs. He had three fundamental objections to socialism. First, he challenged the idea of socialism as the only remedy for the ills of capitalism12. Secondly, he did not support the emphasis socialism gave on the class basis of politics and thought13. He always emphasized the classic liberal positions, that is, importance of individual choice and character, the role of intelligence and the autonomy of ideas, and the potential harmony of interests between capitalists and workers against the class analysis of socialists. Keynes recognized only one class war, that between the clever and the stupid. Finally, Keynes did not believe in equality as an ethical or political goal because he opposed the equality of values. He believed in equality of opportunity and thought that this state of affairs already existed in the England of his day.

Keynes never supported Marx and Marxism14 and did not give much credit to Marx in his writings. He believed that his *General Theory* would “knock away” the intellectual foundations of Marxism (*CW*, XIII, p.492). Yet there exist some similarities between Marx and Keynes. Skidelsky (1988, p.22) argues both of them believed capitalism as a stage in history that would end when capital was plentiful, and also both of them had moral and

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aesthetic distaste for the “money motive”. In spite of the fact that Keynes never endorsed socialism, he appreciated some of the socialist ideals. Keynes was concerned that capitalism lacked the ‘religious’ appeal of communism. He was worried that the “money making” ideology of capitalist economy may be the seed of its own destruction. Therefore, he looked forward to the abolition of the “money motive” as the basis of human activity. Keynes also puts this argument in Marxian terms in General Theory. He distinguished the entrepreneurial economy from a co-operative economy, where the latter had money but it was not a monetary production economy. What mattered was not money in itself, but the prevailing attitudes to it, the psychology of business. Thus the distinction that Keynes acknowledged, share some similarity to the one made by Marx.

III. Keynes’s Suggested Correctives to Problems of Capitalism

Keynes explained a theory of evolution of two distinct stages of capitalist development. He argued that nineteenth-century capitalism differed in institutional and class structure as well as in agent behavior patterns from post World War I capitalism. Keynes distinguished two types of relations between the saving and investing classes during these two stages of capitalism. The first is the owner-managed firms of the nineteenth-century capitalism. In this case capital was financed through retained profits and the savings of the owners themselves who were motivated to sustain their business “as a way of life”. In this phase saving and investment was done by same people whose main concern was the going concern of their business enterprise. Hence there was no separation of ownership from control. According to Crotty (1990, p.768) this characterization of the heroic nineteenth-century entrepreneur was central to Keynes’s understanding of why stage one was “the greatest age of the inducement to invest”.

The second relation involved the emergence of the rentier class who primarily invested in bonds and preferred stocks- not in equity. They sought for long-term income

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16 See Keynes Collected Writings (XXIX, p.81); and Fitzgibbons (1988, p.78)
rather than short-term capital gains\textsuperscript{17}. Here, Keynes implies that as long as there is a large rentier class that holds its wealth in the form of long-term bonds almost “as a way of life” and an entrepreneurial class that both owns and controls business enterprise can coexist in harmony if social and institutional factors are functioning properly. However, Keynes’s explanation of capitalist economy in \textit{General Theory} (1936) is in contrast to this explanation because in \textit{General Theory} he talks about speculative rentier class, which dominates the entrepreneurs. Keynes believed that unlike in the nineteenth century, the twentieth century capitalist economy did not possess a symbiotic, mutually advantageous harmonious, relationship between rentiers and the entrepreneurs (Henry 2001). There was a conflict of interest between the producers of goods and those who wanted to produce money\textsuperscript{18}.

The links between Keynes’s philosophy and his formal economics have been obscured. The harmony of Keynes’s earlier ideas with his economics was accomplished only over time. In the \textit{Tract on Monetary Reform} Keynes stood on the boundary of known economic thought and in \textit{Treatise on Money} he was wide of both philosophy and economics. It was only in the \textit{General Theory} that he presented his economic ideas. Fitzgibbons (1988, p.107) describes Keynes’s \textit{General Theory} not as a general scientific theory, but as a conscious return to the pre-neoclassical traditions, which understood economics as an art, based on common sense subject to the principles of reason\textsuperscript{19}. In \textit{General Theory} Keynes’s vision to mitigate the problems of capitalism implied that the state should have a large role in the regulation of economic life. Keynes’s main charge against capitalism was not that private self-interest allocated resources inefficiently or unjustly between different uses\textsuperscript{20};

\textsuperscript{17} See Keynes (1963) and Crotty (1990a and 1990b, p.769). Keynes (1963, pp.83-85, emphasis added) writes “for a hundred years the system worked throughout Europe with an extraordinary success and facilitated the growth of wealth on an unprecedented scale. To save and invest became at once the duty and the delight of a large class. The savings were seldom drawn on…..
The atmosphere thus created well harmonized the demands of expanding business…..with the growth of a comfortable non-business class….. Investments spread and multiplied, until for the middle classes of the world, the gilt-edged bond came to typify all that was most permanent and secure”.

\textsuperscript{18} In Veblen’s (1904) words there was a fundamental dichotomy between industrial motive (producing goods and services) and pecuniary motive (producing money).

\textsuperscript{19} See Keynes Collected Writings (Keynes’s Letter to Roy Harrod, 1935, CWXIII p.552), “ What I want is to do justice to schools of thought which the neo-classicals have treated as imbecile for the last hundred years and, above all, to show that I am not really being so great an innovator, except as against the neo-classical school, but have important predecessors and am returning to an age-long tradition of common sense”.

\textsuperscript{20} Keynes specifically denies that in (CW, VII, pp.378-9)
but that it failed to ensure full use of the potential resources. Therefore, intervention recommended by Keynes suggests a quite different logic compared to the socialist models, which were aiming for the achievement of distributional justice.

In the concluding chapter of *General Theory*, Keynes (1936) points out failure to provide full employment and arbitrary and inequitable distribution of income as two outstanding faults of capitalism. Economic equality was not of primary importance to Keynes and he saw “social and psychological justification for significant inequalities of incomes and wealth” because they were “a good stimulus to economic growth and a not too anti-social channel for egoism”. However, as Henry (2001, p. 645) argues, Keynes did not believe that “the distribution resulting from market forces was correct for economic growth and social stability”. Keynes saw the redistribution program as necessary, “not just because it produces a better performing economy but because it maintains the property relations of a capitalist society” (ibid p.646). Unlike the orthodox economic theorists of the time Keynes placed employment, wages, and related matters in a social context. “Keynes’s workers were real workers, not merely a factor of production” (ibid, p. 644). As these workers represented a social class and this class was a necessary characteristic of a monetary economy, proper policies aimed at maintaining this class at a reasonable level of comfort was essential.

There are two main elements to Keynes proposed policies for redistribution. First, by demolishing the theory of the natural rate of interest, which justifies the rate of profit in terms of the productivity of capital and the rewards to saving, Keynes was able to show that the distribution of income was “arbitrary and inequitable”. The return on capital is related to interest rates, and Keynes argued that these are determined by expectations and psychological factors. Consequently, the relative shares going to labor and capital could also be changed by policy, without necessarily affecting economic growth. Keynes advocated state intervention to pursue a low interest rate policy through the authority of the central bank. With low interest rate the “scarcity value” of capital will be gradually eliminated and in consequence the parasitic portion of capitalistic class that lives through high interest rate will be eliminated. This he termed the “euthanasia of the rentier” – the

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functionless coupon clipper who earns a return without taking risk (Wray 2007a). In addition to improving equity and reducing inequality\textsuperscript{23} “by eliminating unjustified return, the low interest rate policy also lowers the bar so that—as Keynes put it—average luck and ability are sufficient to ensure a good probability of success”\textsuperscript{24}. Furthermore, since effective demand determines the total output and employment in Keynes’s theory, it is consumption rather than saving that stimulates investment, therefore redistribution from high to low income raises aggregate marginal propensity to consume and will also have a positive effect on accumulation or the growth of capital.

Second, Keynes also advocated that the state should organize a socialized investment program as a part of redistribution process. This does not mean Keynes was promoting state socialism; neither was he promoting the ownership of means of production by the workers. Rather, he was proposing that the state needed to determine scale of investment and its reward. Keynes regarded the socialization of industry as a matter for judgment rather than dogmatism\textsuperscript{25}.

Here Keynes (1936) was advancing government-spending policies to stabilize the aggregate level of investment in the national economy. Keynes believed that the state could run budget deficits and invest in job creating activities such as education, infrastructure, healthcare, and so on during times of high unemployment or recessions. And during times of economic boom, the government would need to reduce its investment spending and run budget surpluses. By using the government budget counter cyclically the economy would be more stable, businesses and consumers would face less uncertainty, and both groups would spend more\textsuperscript{26}. In brief, monetary policy and fiscal policy could function as uncertainty-reducing institutions if employed correctly. They create a stable environment for investment where the firms can be optimistic because production from any new plants will be sold at expected future profit. This also keeps the investors from hoarding money in

\textsuperscript{23} As John Kenneth Galbraith said, “people who have money to lend have more money than people who do not have money to lend” as cited by Jemmy Galbraith (2007).

\textsuperscript{24} See Wray (2007, p.10).

\textsuperscript{25} Industry that was still strongly motivated was not to be socialized, but tired industries that had lost their entrepreneurial drive were to be subject to social pressures to act for the public good. They were not to be nationalized or otherwise used to advance a socialist state, but they were to be socialized to advance the rule of moral reason (Fitzgibbons 1988).

\textsuperscript{26} This argument is also in line with functional finance approach of Abba Lerner (1943, 1947) and modern money view as explained by Wray (1998). Also see (Pressman 1987, 1995).
fear of bad economic times. Other institutional arrangements created by the state that tend to stabilize the economy will have similar beneficial effects.

IV. Keynes and the Consensus Position

Keynes was writing at the period after world war one when there were major social changes going on, some of the socialist movements were taking place. As a result, there was a growing threat among the intellectuals of the time that the existing capitalist social order would be eliminated in favor of socialism. Keynes's vision of an extremely unstable modern capitalism focused on the behavior of enterprise managers and wealthy rentiers and stressed the separation of ownership from management. Keynes believed that power had changed hands since the nineteenth century. It passed from captains of the industry to a class of wage earners, which was not the proletariat\textsuperscript{27}. Keynes was a philosopher as well as an economist, his moral sentiments explain an economics that shows hostility toward money making financial speculation, wide inequalities in wealth and income, absentee ownership, and rentiers\textsuperscript{28}. Thus unlike other consensus theorist of the time such as J. B. Clark, Keynes thought that inequitable distribution of income prevailed in the existing system and redistribution of wealth was necessary. Nevertheless, the purpose of redistribution was motivated to safeguard capitalism from itself.

Even though Keynes’s policy prescriptions were targeted towards safeguarding capitalism from its own faults, laissez-faire was not his ideal. Keynes’s most famous attacks against laissez-faire and classical liberalism can be found in The End of Laissez-Faire\textsuperscript{29}. Keynes (1926) argued that feudal lords and churches developed laissez-faire as an opposition to controlled economy. It holds particular relation to property; that is, it was a general theory developed by capitalists surrounding property\textsuperscript{30}. The system of laissez-faire was designed to provide liberty to property owners to do what they want to do with their

\textsuperscript{27} See Crotty (1990b) and Gilles (2007)

\textsuperscript{28} See (Dillard, 1980) for Keynes’s moral sentiments about Capitalism

\textsuperscript{29} The End of Laissez-Faire was a pamphlet derived from conferences at Oxford in 1924 and Berlin in 1926 and was published by Hogarth press.

\textsuperscript{30} It was a theory developed for certain class interest which was put forward as something of general interest. This is what Marx called “Illusion of the epoch”.

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property. Gilles (2007) argues *laissez-faire* was born out of the combination of two currents of thought, conservative individualism and democratic socialism, or egalitarianism. This combination allowed economists to associate private gain with public good. Individualism and *laissez-faire* thus became the dominant ideologies during Keynes's time\(^{31}\).

As an economist, Keynes firmly believed in making his assumptions as realistic as possible. In contrast, *laissez-faire* assumes away imperfect foresight and other complexities of the economic system including monopoly, adjustment over time, externalities, and joint costs, which Keynes regarded as the dominant features of economy.

In addition to agreeing with classical economists such as Smith and Ricardo that rent was an unearned income accruing to the nonfunctional class of landlords, Keynes went further and claimed that interest was also an unearned income going to the nonfunctional rentier class. Unlike Marx who saw rent, interest, and profits as elements of surplus value, produced by labor. Keynes saw wages and profits as earned income going to the workers and capitalists. Therefore while Keynes partly shared Marx's labor theory of value, he did not accept Marx's theory of surplus value\(^{32}\). Furthermore, while Marx saw rent, interest, and profits as appropriated surplus, Keynes did not view these as completely unnecessary as some inequality is necessary to reward initiative (Keynes 1936, p.374). Given the property laws of capitalist society, he considered these as necessary incomes\(^{33}\). Therefore Keynes's reformist philosophy was in opposition to Marx's revolutionist outlook\(^{34}\).

According to Marx the existence of income to classes other than workers was considered exploitation of labor and exploitation was a means by which surplus value is appropriated. “For Marx exploitation could be eliminated only through revolution and expropriation.

\(^{31}\) Keynes condemned laissez-faire at the end of his career as he had at the beginning. He wrote on this subject in 1941: “To suppose that there exists some smoothly functioning automatic mechanism of adjustment which preserves equilibrium if only we trust to methods of *laissez-faire* is a doctrinaire delusion which disregards the lessons of historical experience without having behind it the support of sound theory” (Keynes 1941, CW 25,p.21-2)

\(^{32}\) Authors such as Dudley Dillard claimed that Keynes also adopted labor theory of value approach as a fundamental element of his monetary theory of production. However this idea remains controversial (Wray 1993 p.553). On the labor theory of value, Keynes’s key statement is: “I sympathize, therefore , with the pre-classical [Smith-Ricardo] doctrine that everything is *produced by labor*…It is preferable to regard labor, including, of course, the personal services of the entrepreneur and his assistants, as the sole factor of production” (Keynes 1936, pp. 213-14).

\(^{33}\) Also see Dillard (1948) and Wray (1993 p.553).

\(^{34}\) “Apart from a bare recognition that Marx had something to say about effective demand, Keynes was always scornful of the work of Marx” (Dillard 1948, p.322).
Whereas, in Keynes’s view unearned income could be eliminated by reducing the interest rate to zero” (Wray 1993 pp. 553-4). This would eliminate rentier income and capital would become less scarce. Therefore expropriation was not necessary to Keynes35.

Keynes’s ideology was to transcend the destructive and restricting constraints of the “money-motive” ideology (Henry 2001, p.637). In his essay, Economic Possibilities for Our Grandchildren, Keynes (1930) said of the future: “We shall be able to afford to dare to assess the money motive at its true value. The love of money as a possession... will be recognized for what it is, a somewhat disgusting morbidity” (ibid, p.329). Keynes’s strong sentiments against the love of money illustrate money as being responsible for the major shortcomings of contemporary capitalism36. Moreover, Keynes believed that the money motive, while certainly promoting of material wealth, was unable to produce the unifying, galvanizing, public-spirited cohesion necessary to maintain society. Thus he considers government intervention as a way to seek harmonious society where consensus is the norm37. Nevertheless, Keynes’s “love of money” meant two things. The first was the objectless pursuit of wealth, the second was the disposition to hoard money. Keynes economic theory seems to attack the hoarding aspect of “love of money”. He does not give more emphasis to the first criterion (Skidelsky 2009, p.146). In other words, even in his critique of the money making motive, Keynes was concerned about saving capitalism because the hoarding aspect of love of money causes reduction in investment and, hence, an effective demand problem, resulting in more unemployment and, hence crisis in

35 According to Dillard (1984, p.429) “In Keynes’s ideal society, private ownership and entrepreneurship would continue”. Similarly Dillard interpreted Keynes’s call for “socialized investment” as the reformist call for elimination of “unnecessary” incomes that result from artificial scarcity- and not as support for expropriation (Wray 1993 pp.554).

36 Henry (2001, pp.7) argues that “Keynes recognized that the continuation of capitalist society required a social acceptance based on an underlying ideological program. Capitalism is a system that fractures society through its promotion of individualism, greed, and the use of money (income and wealth) and the use of money (income and wealth) as a measuring rod of one’s value to society” (Keynes 1925b, pp. 267-9).

37 In The End of Laissez-Faire (1926) he says, “I propose a return, it may be said, towards medieval conceptions of separate autonomies. But, in England at any rate, corporations are a mode of government which has never ceased to be important and is sympathetic to our institutions. It is easy to give examples, from what already exists, of separate autonomies which have attained or are approaching the mode I designate - the universities, the Bank of England, the Port of London Authority, even perhaps the railway companies. In Germany there are doubtless analogous instances”.

He also says argues the new organization of society control should ideally “lie somewhere between the individual and the modern state” (p. 313) because, “the cure lies outside the operations of individuals; [in fact] it may even be to the interest of individuals to aggravate the disease” (p. 318).
capitalism. Thus hoarding is bad for capitalist economy and Keynes was arguing against it in his theories because he wanted to prevent crisis in capitalism.

V. Conclusion

Keynes might be seen as the most brilliant non-economist who ever applied himself to the study of economics. He was a philosopher and his economics was philosophically inspired. He was not a socialist, but nor was he an uncritical admirer of capitalism. He saw capitalism as a necessary stage to get societies from poverty to abundance. However, unlike Marx he did not look forward to capitalism’s violent overthrow. Rather, he valued private property and decentralized decision making as requirements for economic efficiency and political liberty. So he wanted to preserve capitalism from its critiques on both the extreme right and the left.

A just economic system to Keynes was the one in which reward was proportioned to merit or contribution. As a follower of Aristotle he believed that “nothing is more unjust than to treat unequal’s equally”. He was a meritocratic elitist who believed that talented intellectuals would resolve social and economic problems. He saw social and psychological justification for significant inequalities of incomes and wealth existing in capitalist society. As Fitzgibbon’s (1988) argues Keynes’s redistribution program should not be overstated as equalitarianism, as it was only a means rather than an end. His redistribution program was to promote capitalistic accumulation, which was essential to save capitalism as a system.

Keynes’s vision can be summed up in a phrase, it is that of the “harmonious society” Skidelsky (2009, p.190). In his own words Keynes’s (1926) says, “I think that Capitalism, wisely managed, can probably be made more efficient for attaining economic ends than any alternative system yet in sight” (p. 321, emphasis added). Therefore Keynes was not in contradiction to the capitalist system and in fact his new ideology and reformist policies were proposed in order to save capitalism from itself or to save society from on going socialist activities of his period.

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38 See Skidelsky (2009, p.55)
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Debt Deflation Processes in a Monetary Production Economy: Veblen, Fisher, and Minsky

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Abstract: This paper employs the theories of Thorstein Veblen, Irving Fisher, and Hyman Minsky to develop a theory of the business cycle based on debt and external financing. We start by separately examining each of the theories in detail in order to develop a sound base before combining them to show the basic similarities between them. In doing so, we show how debt and the external financing of investment are key characteristics to an expanding economy as well as the causal mechanisms in the debt deflation process. We also look at what, if anything, can be done to stop them once they have started and prevent them in the future. We then combine the theories to explain how a business cycle based on debt works before showing that the subtle differences are due to differences in the financial system of the time. This paper concludes by postulating that in a monetary production economy (M-C-M'), any theory that does not include a role for debt cannot accurately describe the business cycle.

I. Introduction

Capitalist economies are ones in which the purpose of business is to maximize profit. Such a process can be labeled as M – C – M'. Money is invested for the purpose of producing commodities, which are then sold to the public. The difference between M' and M is kept by the business as profit. This process is markedly different from the C – M – C' model put forth by Say (Henry 2003). In Say's model, the exchange of commodities serves as the purpose of production. While this may be the goal of the individual worker, it is not the goal of business, and looking at the economy in such a manner ignores the role that debt plays in the production process.

In a monetary production economy, the first step is the accumulation of debt or credit (M). Without debt, the production process cannot begin, as this debt is needed in order to hire workers and purchase capital and other factors of production, leading to
increased employment and output. But if taking part in the production process requires such debt, why even enter into it? This is the role of expected profits; if business owners believe they can expect some level of M’ that is sufficiently greater than M, production will occur. However, when expected profits fall short of realized profits, owners will find that they have credit obligations that are impossible to meet, requiring a liquidation of assets. This can lead to periods of prolonged recession and depression as capitalists cut production in order to protect their slim profit margins, meaning less output and increased unemployment.

The above is simply a brief summary of how a monetary production economy operates. The purpose is to show that the most important part of the production process is the accumulation of debt, without which the production process cannot occur. Therefore, it is impossible to understand the business cycle without a firm understanding of the role debt plays in its initiation. Thorstein Veblen, Irving Fisher, and Hyman Minsky have each advanced a theory of the business cycle in which debt and its effect on profits provide the motivating force. Each of these theories, however, is incomplete in different ways; Veblen and Fisher do not put much focus on the workings of the financial markets while Minsky does not fully capture the pecuniary forces behind production.

The issue, then, is to create a cohesive theory based on the works of Veblen, Fisher, and Minsky in which debt is the leading factor in causing the business cycle. This paper does so by showing that Veblen, Fisher, and Minsky actually do not have three separate theories; in fact, they are extremely similar and, when combined, can be used to form a coherent theory. In doing so, we show that in a monetary economy, debt is the key factor in the creation of the business cycle. First, we analyze the theories of Veblen and Fisher,
focusing mainly on how prices are the drive fluctuations in debt levels. Second, we look at how Minsky’s financial instability hypothesis brings into light the role of the financial system with regards to changes in the rate of interest and the financialization of the economy, adding financial market workings to the role that changes in the price level play. Third, we identify the ways in which Minsky, Veblen, and Fisher recommend preventing and curing debt deflations. Finally, we combine these theories to form a more complete story of what causes fluctuating levels of debt and examine its policy implications.

II. Veblen and Fisher: Credit and the Price System

The debt deflation theories of Veblen and Fisher are very similar. Veblen’s focus is on the operations that cause businesses to become overleveraged while Fisher centers on the process of the deflation once it has started. This is not to say Veblen ignores the process. Indeed, for Veblen (1921), debt deflations emerge through capitalist sabotage, wherein he emphasizes the relationship between business owners and workers throughout the process. To gather the most complete understanding of debt deflations during finance capitalism⁴⁰, however, it is necessary to begin with Veblen and end with Fisher.

In Veblen’s theory, the key is understanding how he separates ceremonial motives and instrumental motives. According to Veblen, human behavior derives from two sets of instincts: instrumental instincts, which include workmanship, leads to behaviors that revolve around industry and making useful, serviceable goods for consumption. Ceremonial instincts, which include salesmanship and predation, lead to behaviors such as making money and wasteful consumption through pecuniary emulation and conspicuous consumption (Veblen 1899). In a monetary production economy, business is the central

⁴⁰ See Section V for a brief discussion of Minsky’s Stages of Capitalism analysis.
issue, and the goal of business is to make money (Henry 2003). Therefore, the central issue is a ceremonial one. This means that the main question revolves around how businesses make profit. For Veblen, this is answered in two ways: first, the issuance of credit during times when profits are rising and second, the workings of the price system allowing businesses to maintain a reasonable rate of profit (Veblen 1904). We begin with the importance of credit first.

For Veblen, the time it takes for capital turnover is key in establishing profits. "If the turnover consumes less than the time ordinarily allowed in the line of industry in which he is engaged, he gains more than the current rate of profits in that line of business, other things equal." (Veblen 1904, 52) There are two ways to shorten the interval of turnover: businesses may adopt more efficient, time-saving industrial processes or businesses may adopt the competitive pushing of sales, which increases the volume of business. As business swells, the magnitude of the turnover becomes larger, so the business owner must resort to credit. This use of credit requires the payment of interest. In boom times, where the business enterprise enjoys a positive spread in earnings over interest payments, the use of debt becomes advantageous to the business, allowing for a faster capital turnover rate. However, while this may be good for one firm, under competitive business, it becomes necessary for all firms (Veblen 1904). This competitive bidding for credit in the aggregate swells the volume of all businesses, leading to a speculative inflation of value given to the industrial business (higher profit expectations). This inflation will increase the production of output, but such production is an indirect result of the use of credit.

This shows the role ceremonial forces play in a boom period of the business cycle. Firms, as they aim to increase profits, resort to the use of credit as it allows them to achieve
capital turnover at a faster rate than otherwise possible. However, at the same time, this indirectly increases their output as it becomes profitable to produce more. Indeed, according to Veblen, this increased output due to credit inflation is the key characteristic of a period of prosperity (Veblen 1904). The important point in this process is that, in the aggregate, the use of credit “serves only to widen the discrepancy between business capital and industrial equipment.” (Veblen 1904, 57) In other words, a difference emerges between what businesses expect to earn in profit and what they actually do earn. However, as long as times are good and prices continue to rise, this discrepancy will go unnoticed and credit will continue to be extended, further inflating the bubble.

We turn our attention now to the role the price system plays within Veblen’s theory of business enterprise. For Veblen, prosperity and depressions are both price phenomena that secondarily impacts industry. As discussed above, industry is carried on by means of investment, which is made with a view towards profit. Because investment requires credit, credit is then inseparable from the management of industry. In good times, the extended use of credit is both a cause and effect as no business expansion can take place without its use. In a similar vein, crises are a period of liquidation due to overextended credit. This shrinkage, for Veblen, is pecuniary. Machines and workers are still productive, but profits have shrunk. Therefore, prosperity and depressions are due to changes in pecuniary returns, not industrial.

Veblen’s approach to prices is that of a markup approach (Mouhammed 2000). In this manner, the prices at which goods are sold are comprised of two parts: direct costs of production and overhead costs, such as managerial salaries, selling costs, depreciation, and interest (Lee 1998). These overhead costs, also called the markup, are what go to the firm
as profits. During periods of prosperity, inflations in the markup lead to higher prices, generating business growth. As prices rise so do prospective earnings, regardless of whether or not these earnings are realized. Elevated profit expectations then cause business owners to increase the turnover rate of their capital, causing output to increase and business to swell. This increased turnover also leads to an increase in the level of external debt as banks extend credit to firms with rising profit expectations. The direct result of this process is a difference in expected profits and earning capacity which goes unnoticed so long as prices continue to rise.

The key question to ask is: What happens when prices stop rising or production costs begin to increase⁴¹? At this point, the business cycle enters a debt deflation process similar to the one described by Fisher (1932, 1933). According to Fisher, the above process can be broken down into four stages: 1) over-confidence leads to 2) over-indebtedness, which leads to 3) over-investment and over-speculations that eventually ends in a 4) crisis. It is this crisis part that in Fisher’s model consists of nine main factors:

(1) Debt liquidation leads to distress selling and to (2) Contraction of deposit currency as bank loans are paid off, and to a slowing down of velocity of circulation. This contraction of deposits and of their velocity, precipitated by distress selling, causes (3) A fall in the level of prices, in other words, a swelling of the dollar (Fisher 1933, 342, emphasis in original).

The first three steps of Fisher’s process are not so different from Veblen’s theory, with the exception that Veblen explains how debt liquidation begins. During times of prosperity, the discrepancy between expected and actual profits is hidden because of high prices. At some point, “where the discrepancy between nominal capital and earning-

⁴¹Wages lag prices, meaning aggregate demand lags inflation. Once wages rise, profits decrease and asset values begin to fall (Raines and Leathers, 2008).
capacity is exceptionally wide,” (Veblen, 1904, 61) creditors realize this discrepancy and begin to withdraw credit. It is here that Fisher begins, as the withdrawal of credit forces firms to sell assets to meet their obligations.

Assuming, as above stated, that this fall in prices is not interfered with by reflation or otherwise, there must be (4) A still greater fall in the net worths of business, precipitating bankruptcies and (5) A like fall in profits, which are running at a loss to make (6) A reduction in output, in trade and in employment of labor. These losses, bankruptcies, and unemployment, lead to (7) Pessimism and loss of confidence, which in turn lead to (8) Hoarding and slowing down still more the velocity of circulation (Fisher 1933, 342, emphasis in original).

In this manner, the fall in prices is what leads to unemployment and the fall in output. This then, in Fisher’s process, leads to “(9) Complicated disturbances in the rates of interest, in particular, a fall in the nominal, or money, rates and a rise in the real, or commodity, rates of interest.” (Fisher 1933, 342, emphasis in original) It is important to note that in this above model, debt liquidation does not necessarily lead to a depression. According to Fisher, it is only when price deflation occurs that an increase in unemployment is seen. Therefore, on its own, a debt deflation is not cause for a depression. Similarly, if a price deflation\(^\text{42}\) occurs on its own, but credit continues to be extended, there is no reason for firms to enter a liquidation process that would lead to increased unemployment. In this manner, it is only when a debt deflation and a price deflation occur together that a depression is likely.

Why must both happen for a depression to occur? The answer, according to Veblen, comes from the fact that business operates on ceremonial forces. Depressions occur

\(^{42}\) It should be noted that a decline in the rate of inflation will have the same effect, as it will diminish expected profits (Wolfson, 1996).
because the production of goods is not profitable to the business owner. When this occurs, owners enter what Veblen calls “capitalist sabotage” (Veblen 1921, 4) in which production is purposely cut to some level below full capacity. In doing so, massive unemployment and underproduction occurs, but businesses do not face insolvency. In the Veblenian debt-deflation process, prices are what cause profits while capital turnover (credit extension) is what increases profits. As long as one or the other is not falling, the ceremonial needs of business will be met. Therefore, a true depression depends upon both debt and price deflation, as the maintenance of profits in such a scenario requires the underemployment of resources.

The above discussion shows that debt deflations are the result of ceremonial forces that push firms to swell their volume. The increased prices due to a credit inflation lead to increased production, but this is only because it is necessary to earn profit. However, the Veblen-Fisher view of debt deflations is slightly limiting because it does not take into account the workings of the financial markets. For example, what happens if the interest rate increases? What if financial markets simply decide not to extend credit, even if prices are rising? What if asset values do not fall when liquidation occurs? These are questions that must be answered if we are to form a more complete theory of a debt-fueled business cycle. For this, we turn to Hyman Minsky’s Financial Instability Hypothesis.

III. Minsky’s Financial Instability Hypothesis

The Financial Instability Hypothesis is based on two main assumptions. First, “capitalism market mechanisms cannot lead to a sustained, stable-price, full employment equilibrium.” (Minsky 1986, 173) As Veblen showed, often times profit motives clash with the goal of full employment, and because the goal of business in a capitalist society is profit,
full employment is not sustained. Second, “serious business cycles are due to financial attributes that are essential to capitalism.” (Minsky 1986, 173). In this manner, the financial instability hypothesis is not markedly different from the Veblen-Fisher process; in essence, it establishes a role for fragile financial markets in triggering debt deflations.

According to Minsky, financial fragility is caused by diminishing margins of safety (Kregel 2007), generated through the price system in the same way as described above. When a firm decides to invest, it uses a combination of internal and external funds coming from profits and financial institutions respectively. The margin of safety, then, is the amount of internal funding available for investment while the amount of external financing is a function of lender’s risk and borrower’s risk. Investment is taken to the point where lender’s risk and borrower’s risk are equal to each other (Minsky 1986). During a period of prosperity, two important changes naturally take place. First, perceived lender’s risk decreases, meaning financial markets are more willing to provide financing. Second, as the use of external financing increases, the margins of safety are eroded, making firms more vulnerable to changes in the financial markets.

Minsky breaks firms’ financial positions into three postures based on the firms’ expected cash receipts and payment commitments on debts. Hedge units are those that expect their incoming cash flows to be sufficient to meet contractual obligations. These units do not have a large demand for external financing, any contingent debt, and they have large margins of safety. Such units are only vulnerable to cost escalations or revenue declines (i.e., non-financial market forces). Speculative units are those whose expected cash flows are less than their current contractual commitments. They can meet the principle payments on their debt, but not the full amount meaning they must roll over maturing debt.
These units are vulnerable to financial market developments such as changes in the interest rate. Finally, Ponzi units are those whose commitments exceed their expected future cash receipts; they cannot meet the individual payments on their debt and must take out new debt to satisfy the old debt. Ponzi units are not only vulnerable to financial market developments, but also face the need for increasing cash flows as their balance sheets are deteriorated due to interest and dividends being paid by increasing debt (Minsky 1986).

This framework allows us to add the workings of the financial markets to a debt-deflation process. During prosperous times, the amount of external financing that is available increases as perceived lender’s risk falls (financial firms are willing to extend more credit). This leads to hedge units acquiring more external financing for investment, eroding margins of safety while at the same time creating an investment boom, increasing output and employment. As the amount of external financing used increases, firms transition from hedge positions to speculative and Ponzi positions. This process is very similar to the ones discussed by Fisher and Veblen. Profit-seeking firms increase investment, as it is a way to increase profits. As business enterprises use increasingly more external financing, a discrepancy arises between incoming cash flows and outgoing payments as increasingly more firms take speculative and Ponzi positions. So long as profits are rising, this discrepancy is ignored as firms believe their future cash flows will be sufficient to meet obligations.

For Minsky, two things can happen here that will initiate a debt deflation. Prices may stop rising or production costs may increase. This will have the same effect as described above in the Veblen-Fisher section. However, Minsky adds a second possibility. For short-term debt, “A rise in the interest rates leads to a decrease in the excess of cash
receipts over cash payments and in the value of assets over liabilities, even as it induces an economizing of cash or liquid assets.” (Minsky 1982, 383) In other words, an increase in the interest rate has the same profit reducing effect as a fall in prices as speculative and Ponzi firms face increasing interest payments, further eroding their margins of safety. When this happens, financial institutions may stop extending credit as risk has now increased, even without a change in prices.

The important piece that Minsky adds to the debt deflation literature is the role of the financial markets. Over-indebted firms are not only vulnerable to changes in the rate of inflation, but also changes in the interest rate as they rely on financial markets to roll over debt and extend credit. If financial institutions are willing to extend credit, then speculative and Ponzi firms can continue to operate with no problems. However, once they decide not to, either because of changes in the interest rate or changes in the price level, these firms must meet their obligations by selling assets, or as Minsky (1992, 8) put it, “making positions by selling out positions.” One can even conceive of a scenario in which financial institutions simply reach a point where they decide not to expand their balance sheets and wait and see if the firms that have already been granted credit will meet their obligations. In this manner, it is not even necessary for prices to fall or interest rates to rise for a debt deflation to start as once credit stops flowing, speculative and Ponzi firms must sell assets to meet obligations.

The preceding discussion underscores the inherent, systemic fragility endemic to monetary systems of production. One question demands our further attention: What policy implications emerge through our Veblen – Fisher – Minsky synthesis? The next section
looks at the role that government and central bank interventions play, as well as identifying how financial innovation can work to stop such deflations.

IV. Preventing and Stopping Debt Deflations

Minsky, Veblen, and Fisher each discuss several ways that the debt-deflation process can be stopped after it has been triggered. For Fisher, everything comes back to prices, as in his view the cause of a depression is the price deflation following the debt liquidation process. Veblen also discusses the role a dose of inflation can have in stopping a debt deflation, but also looks at how collusion between firms works as well. Finally, Minsky shows how financial innovation can be used to stave off a debt deflation along with Big Bank and Big Government interventions.

According to Fisher, “...it is always economically possible to stop or prevent such a depression simply by reflating the price level up to the average level at which outstanding debts were contracted by existing debtors and assumed by existing creditors, and then maintaining that level unchanged.” (Fisher 1933, 346) Keeping prices high functions to keep profits high. In Fisher’s nine steps discussed above, this stops the process before step four, preventing a debt deflation in two ways. First, the increased profits that come with the increased prices would allow firms to meet their obligations without selling assets. There may be a recession as output falls due to less investment but no severe depression. In Minskian terms, firms would be moving from Ponzi positions to hedge positions with no severe decline in output. Second, maintaining a high level of prices also prevents profit expectations from falling. In this manner, financial institutions will be willing to continue to extend credit, preventing debt deflations. In this manner, Ponzi firms would be able to stay Ponzi firms as they will continue to be able to find financing to meet obligations.
Fisher, however, does not explain how prices can be kept inflated. Veblen identifies two broad strategies for keeping prices inflated: increasing unproductive consumption of goods and the elimination of competition (Veblen 1904). Increasing unproductive consumption stimulates aggregate demand, maintaining high prices, profits, and expected profits. This allows firms to not only meet their obligations but also continue to obtain credit. The elimination of competition not only reduces aggregate supply, but also gives firms market power, allowing them to set prices at profitable levels. Furthermore, increased market power gives firms “goodwill,” or intangible assets due to market power, unused borrowing power (i.e., consistently paying back obligations), etc. This makes financial institutions more likely to lend to them in times of trouble because these firms can set their prices. For Veblen, it is collusion that can successfully put aside depressions: “Such business coalitions have the effect of bringing profits to a reasonable level, not only by making it possible to regulate output and prices, but also by the economies which are made practicable on this footing.” (Veblen 1904, 136) Obtaining monopoly power through the elimination of competition lets firms set their prices at a high level, preventing the deflation that would trigger a depression.

Raines and Leathers (2008) identify four main remedies for chronic depression based on Veblen’s theory. First, there are monetary remedies. An increase in the money supply can lead to speculative inflation, maintaining high prices and profits. Second, an increase in government expenditures via wasteful consumption (such as war spending) stimulates aggregate demand. This increased spending promotes the full use of technology and output, meaning prices will remain elevated and output will not fall satisfying both the profit motives of business and productive motive of the workers. The third and fourth
methods are protective tariffs and collusion, both of which function to diminish competition and reduce output, thereby keeping prices high. From this, it should be clear that Veblen and Fisher do not have very separate theories regarding how to prevent debt deflations; Veblen is simply more complete with his analysis, providing tools for preventing the price deflation that would otherwise trigger a depression.

Minsky, in allotting a role for the financial system, identifies other possible solutions for preventing debt deflations. For Minsky, price inflation is important, but it is also important to maintain high asset values. Once businesses realize they do not have the cash flow to meet obligations, they begin to sell assets. If all firms do this, “the fall in asset prices can be so large that the sale of assets cannot realize the funds needed to fulfill commitments.” (Minsky 1982, 384) By preventing the fall in asset prices during distress selling, it is possible to stop the debt deflation process after Fisher’s first step. The ability to meet payments is not frustrated (i.e. firms do not have to sell more assets than would otherwise be necessary), and margins of safety obtained from asset values are not eroded. To protect both prices and asset values, Minsky recommends the use of Big Bank and Big Government intervention policies. Big Government functions through tax cuts and spending increases, which act to sustain prices and business profits. This works in the same manner as discussed by Veblen and Fisher. The role of Big Bank, then is to act as a lender of last resort putting a floor on asset values while socializing private risk (Minsky 1986). This functions to keep asset values high, preventing the deflation process that comes with distress selling.

It should be noted, however, that a debt-deflation in Minsky’s theory truly begins when financial markets stop extending credit to speculative and Ponzi firms. The role of Big
Bank and Big Government, then, is to maintain expected profits at a high enough level so that banks and other financial intermediaries continue to lend. However, financial markets can use financial innovation to find new ways of providing external financing and refinancing. For bankers, this is an extremely profitable way to lend to firms as it allows them to increase their leverage, which increases their per-share earnings.

The use of financial innovation to maintain profits, however, results in a more unstable system. According to Minsky,

> The liability structure used to finance holdings of capital assets changes, which in turn affects the structure of financial relations and payment commitments: mergers, takeovers, and acquisitions change liability structures without changing the aggregate output or the productive capacity of the economy (Minsky 1986, 197).

Therefore, financial innovation leads to firms increasing debt without actually increasing production. In a monetary production economy ($M - C - M'$), this is the equivalent of increasing $M$ and $M'$ with no increase in $C$. So while financial innovation is successful in keeping prices high and thereby preventing debt deflations, it does so by replacing profits in the productive sector with profits in the financial sector. This is what is meant by the financialization of the economy (Lawson & Lawson, 1990). The problem with the use of financial innovation to prevent a debt deflation, however, is that it does not replenish the margins of safety, meaning the system becomes increasingly unstable. Because liabilities are larger than they would have been, any change to the financial system (such as a rise in the rate of interest) will cause the subsequent debt-deflation to be larger than it otherwise would have been. Furthermore, this increase in profits without production is the ultimate ceremonial action. By transitioning from $M - C - M'$ to $M - M'$, business owners are able to achieve their ceremonial goals of increased profit and ignore the part that benefits society.
In essence, financial innovation leads to high profits for firms while society suffers from the lack of production. This is why stability requires the use of Big Bank and Big Government to prevent debt deflations as such interventions replenish margins of safety.

V. Identifying Differences and Putting It All Together

Until now, we have focused on developing the theories of Veblen, Fisher, and Minsky with regards to how the debt deflation process works and what can be done to prevent them. This section focuses on putting the theories together to form one cohesive process before examining why there are subtle differences.

The business cycle in the Veblen – Fisher – Minsky models has a strong focus on the role of external financing. At the start of the cycle when times are good and prices are rising, profit expectations are high. In Minsky’s financial instability hypothesis, this induces hedge firms to become speculative and Ponzi as they turn to financial markets to finance investment. For Veblen, this has the effect of increasing the rate of capital turnover; firms swell the volume of their business through pushing sales, which requires the use of credit. This creates a discrepancy between the amount of profit a firm is capable of earning and the amount a firm is expected to make. As long as prices continue to rise or interest rates are kept low, this discrepancy goes unnoticed and investment will continue to take place, leading to increased output and employment.

Prices, however, cannot continue to rise indefinitely. One or more of the following occurs that triggers the deflation process: wages begin to rise leading to a decrease in profits, prices begin to decline (or at least stop rising as fast), interest rates begin to rise, or financial firms simply decide to wait and see if their current clients will repay loans (they stop extending credit). This means over-indebted firms cannot meet their obligations so
they must begin a distress selling of assets. From here, one of three things can happen. First, the federal government can step in using Big Bank and Big Government interventions to prevent a debt deflation by maintaining high prices and asset values. For Veblen, Fisher, and Minsky, this would be the most preferred as it rebuilds the margins of safety while also potentially allowing for regulation of the troubled industries. Second, financial innovators can create new tools in order to allow speculative and Ponzi firms to continue to obtain credit, preventing the need to sell position to make position. This would prevent a debt deflation in the present, but at the same time create an increasingly unstable system with a larger bust later. Third, there can be no intervention or innovation of any kind and a debt deflation process like the one described above by Fisher will take place.

What this shows is that Veblen, Fisher, and Minsky really do not have three separate theories. In fact, it is one main theory of debt deflations where the trigger comes from different places. For Veblen and Fisher, the process begins when expected profits decrease while Minsky includes the workings of the financial markets to this process. For Minsky, changes in the short-term interest rate, asset values, and margins of safety play large roles in creating a debt deflation scenario. It would be incorrect, however, to say that these theories are exactly identical. The point we want to make is that the differences between the theories lie mainly in what can cause debt deflations, leading to slight differences in the best way to prevent one. The question to ask now is what is the source of the difference. For this, we turn to Minsky's stages of capitalism analysis.

Minsky identified four distinct stages of capitalism that coincide with the mechanisms of the financial system of the time: commercial capitalism, finance capitalism, managerial capitalism, and money manager capitalism (Minsky & Whalen 1996). Within
commercial capitalism, the purpose of the financial system was to facilitate commerce, prior to the industrial revolution. During the industrial revolution, large industrial firms required investment banks to provide financing for capital equipment, bringing forth finance capitalism. During this period, booms and busts were common so investment bankers were forced to protect their clients through the creation of trusts and monopolies, creating a largely unregulated era that ended with the Great Depression (Whalen 1997). During the Great Depression, managerial capitalism was put into place by reducing financial competition, sustaining profits when the economy faltered through the use of government spending, and allowing banks to use government debt for financing. This created a stable system that lasted until the late 1960s.

However, this stability did not last. Money-manager capitalism was born out of the financial system evolving towards more speculative practices and new institutional innovations (Minsky & Whalen 1996). This stage of capitalism is marked not only by the increased use of private debt for external financing of investment, but also in the increased use of short-term debt in order to acquire capital assets. Because of the reliance on private debt, institutions that manage financial instruments and portfolios have most, if not all, of the power. Furthermore, “the stated aim of these money managers, and the sole criterion by which they are judged, is the maximization of the value of the investments made by the fund holders.” (Minsky & Whalen 1996, 159) In this manner, money manager capitalism is actually very similar to finance capitalism, albeit with a more powerful financial system. In both, private debt is used to finance investment with the goal being to achieve the largest profit possible. Furthermore, while Wray (2009, 4) states money manager capitalism is “an economic system characterized by highly leveraged funds seeking maximum returns in an
environment that systematically under-prices risk,” the same can be said for finance capitalism, in which firms undergo high levels of debt in order to swell production to earn maximum profits. The main difference is that within finance capitalism, in order for firms and financial institutions to earn profit, production (C) had to take place. In money manager capitalism, with the advent of financial innovation, no production is necessary for profit (M-M’).

By looking at the stages of capitalism, it is possible to see both why the theories of Veblen, Fisher, and Minsky are similar and why they are different. The stages within which each were developing their theories (Veblen and Fisher in finance capitalism and Minsky in money manager capitalism), as stated above, are very similar. Furthermore, the fact that Minsky has more of a focus on the workings of the financial markets than either Veblen or Fisher also reflects the fact that such markets were larger and played a larger role in the business cycle than when Veblen and Fisher developed their theories. In this sense, Minsky's work mainly provides an update of Veblen and Fisher by allowing a role for large financial institutions in the debt deflation process.

VI. Concluding Remarks

The purpose of this paper was to create a cohesive theory of the business cycle through a focus on debt based on the theories of Veblen, Fisher, and Minsky. We have shown that the three theories are quite similar with the main differences coming from the fact that Minsky was writing during money manager capitalism during which the financial system played a much larger role in the economy. Furthermore, we have shown that while Veblen and Fisher lay the groundwork for a theory of debt deflations based on the price system, Minsky updates this by including the workings of financial markets. By combining
the processes developed by Veblen, Fisher, and Minsky, we have a firm understanding of how a debt-fueled business cycle works within a monetary production economy.

The preceding analysis establishes the base for a more developed theory that focuses on the use of debt within the business cycle. And while we have firmed up our base, there remains much work regarding the actual task of constructing a theory. For example, it would be beneficial to identify the relationship between private debt and public debt, as done by Godley and Izurieta (2002). Furthermore, while we have here begun to develop a theory that shows debt plays a significant role in the business cycle, empirical data is necessary to support this claim. Future research should focus on examining how levels of private debt fluctuate with relation to output and employment. Finally, while we have discussed basic policy for stopping debt deflations, we have not gone into great detail. There is much work to be done regarding ways in which debt deflations can not only be stopped when they begin, but also prevented from occurring in the first place. However, we recommend and agree with the policies propose by Wray (1998, chapter six), Mosler (2010), and the final chapter of Minsky (1986) regarding specific policy recommendations.

In a monetary production economy, debt is key. Without debt, production cannot take place. In this manner, models and theories that do not include a role for credit and the external financing of investment cannot give an accurate description of the business cycle. In money manager capitalism, this means allocating a role for financial institutions. Veblen, Fisher, and Minsky all have a strong focus on these issues, and to view their theories as three separate ones prevents us from understanding that the combination gives a much clearer picture of how debt functions within the economy and its role in the business cycle. Indeed, their theories give a solid base for a well-developed theory of debt-deflations and
the business cycle, one that we believe will give a more accurate description of the economy than is currently available.

References


Economic and Ecological Sustainability in the Globalized World: A Brief Study

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Introduction:
At the conclusion of his “Stern Review: The Economics of Climate Change,” economist Nicholas Stern writes that “climate change is a serious global threat, and it demands an urgent global response” (Stern 2006: vi). Stern also suggests economies dedicate around 1% of global GDP to reducing the factors of climate change in order to positively impact the decades ahead, though it is unclear whether such actions would lead to a significant enough impact. Regardless, major economies acting in a homo economicus way—consuming natural resources and polluting the environment—will need to adopt policies that encourage homo reciprocans policies—preserving natural resources, the economy, and the environment for future generations.

The purpose of this paper is to answer the following: paying close attention to issues such as ecological conservation and economic development, how have the international treatises and global policies of the past shaped the use and abuse of global public goods as well as the environment, and what concessions must be made by major economies in future treatises to ensure fairness in environmental and economic policies as well as economic growth in developing economies?

The ability of economies to rein in their usage of global public goods will prevent major climate changes that have already started to affect life around the world. Climate change is already affecting food production, the availability of water, and the health of cultures worldwide. Given that 97.4 percent of US climatologists answered yes to the
question of whether they believed human activity was a significant factor in changing the mean temperature of the world, climate change is not (as some media outlets suggest) a myth (Stern 2006: ix). Establishing the framework that economies will need to follow in order to prevent major shifts (or tipping points) with regard to the climate is necessary for ensuring the possibility for long-term economic and human survival.

Part one of this paper seeks to provide the reader with scientific evidence (as outlined in the “Stern Review”) surrounding the economic and environmental impacts of global warming. After a brief definition of globalization in terms of ecological economics, the next section examines the international treatises and global policies of the past (such as the Kyoto Protocol of 1997), as well as their successes and failures in terms of global warming, economic development, and environmental sustainability. The fourth section of this paper will discuss the issue of fairness (i.e. who should bear the burden of pollution and environmental sustainability in future discussions of economic development) in terms of ecologically sustainable mindsets and future policies, as well as the political feasibility of these policies. Finally, section five of this paper will serve as a conclusion to the discussion, commenting on the environmental and economic outlook of the near future, as well as the potential for future discussion and research in the field of ecological economics and policy-making.

“The Stern Review”

The Stern Review asserts that global climate change is more than “the biggest market failure ever”—in other words, it is a serious threat to mankind and not just an economic, or cost-benefit, issue (Stern 2006: 3). Climate change is not an issue that will
simply disappear with time; because of time-lags in the climate system due to greenhouse gases, it is necessary to act now rather than waiting to see if the hypothesized consequences of climate change occur. Further, the world must consider the possibility that global warming and climate change will lead to catastrophic, irreversible changes to the entire global environment. Simply considering one consequence of global warming—for example, the rise in sea level—one can see the consequences for the entire world: the rise in sea-level could lead to the deterioration of life in coastal areas of the world, where most of the world’s citizens currently choose to live (Eriksson and Andersson 2010: 97).

If no action is taken to reduce emissions, Stern warns that the concentration of greenhouse gas in the atmosphere could double its pre-industrial level within the next 25 years, leading to a global temperature rise of over two degrees Celsius and possibly over 5 degrees (Stern 2006: 1). Economically, as well, climate change could have dire consequences. Stern estimates that choosing not to curb greenhouse gas emissions will result in costs and risks associated with global warming of at least five percent (another estimate ranges as high as 20 percent) of global GDP, whereas the cost of action is around one percent (Stern 2006: iv).

Yale Professor William Nordhaus, however, was amongst the group of economists to point out issues surrounding the absolute science and projections of Stern’s findings. Nordhaus (2007) first noted that “the Review should be read primarily as a document that is political in nature and has advocacy as its purpose” (5). To claim Stern’s findings as absolute science, then, according to Nordhaus, would be fallacious. Further, Nordhaus asserted that “an examination of the Review’s radical revision of the economics of climate change finds...that it depends decisively on the assumption of a near-zero time discount
rate combined with a specific utility function” (Nordhaus 2007: 1). Nordhaus’ critique takes into account the effect a low discount rate has on the present or projected costs of climate change. At a lower discount rate, Nordhaus argues that there are higher costs of not acting today in terms of future values. The usage of such a discount rate skews the costs and benefits of fully choosing to act on Stern’s warnings, though Nordhaus (himself an established environmental economist) does not necessarily question the science behind Stern’s belief that climate change will be incredible detrimental to the planet.

While there are positive effects to climate warming (longer growing seasons, more desirable temperatures), Stern writes that these benefits should not be overstated, as climate change will hit the poor of the earth much more than the rich (the people enjoying said positive effects). Parts of Africa are already feeling the effects of climate change and research indicates conditions can only worsen. Researchers at Stanford University and the International Maize and Wheat Improvement Centre in Mexico, for example, found that peak temperatures (days during which the temperature is above 30°C) tend to significantly diminish the yield of maize crops (“One Degree Over” 2011). Furthermore, if the average temperature increases by just a small amount (such as 1°C), two-thirds of the yields across the maize-growing regions of Africa (where temperatures have already risen significantly due to climate change) have the potential to be reduced.

Stern advocates stabilizing CO₂ emissions between 500 and 550 parts per million by the year 2050 (Stern 2006: 2). Current levels are near 440ppm and are rising by more than 2ppm per year (ibid). Stabilization, then, “requires that annual emissions be brought down to more than 80 percent below current levels” (ibid). It is important to note here that this is what Stern calls a low-risk level of greenhouse gas emission, but not a zero-risk level.
Stern admits that even this level is considered relatively high, and further reductions will need to be made following 2050 as the world deems fit.

While Stern recognizes the Kyoto protocol and the United Nations Framework Convention on Climate Change as the world taking action, he advises that global institutions combating climate change must be further developed. These institutions can help decouple the link between CO₂ emissions and economic growth (a process known as *degrowth*), as well as help establish carbon markets that would promote cost-effective reductions in emissions and “bring forward action in developing countries” (Stern 2006: 4). Further, development goals should focus on preparing nations (especially developing ones) to adapt to inevitable climate changes. Part of this adaptation will be dependent on what Stern calls “technology cooperation:” in order for a sustainable world to exist in the future, economies will need to sharply increase their investing in research and development in the coming years (Stern 2006: 4).

The Stern Review was met with both praise and media criticism, and steps were taken by nations to prevent further excessive climate change. Australia, for example, pledged AU$60 million to grant projects within the country to reduce greenhouse gases. Policies Stern advocated (notably emissions trading) were implemented in national and international treatises, as outlined in the third section of this paper.

*Globalization from the Ecological Economics Perspective*

The term globalization refers to the ability of economies to “integrate” and harmonize via a “compression of the world and...tightening of all the linkages—economic, political, social, [and] environmental—between developments here and events in far
corners of the world” (Bitzenis 2009: 233, Speth 2003: 1). Since the 1980s, the focus of international organizations such as the United Nations and the World Trade Organization has been on integrating economies via globalization strategies such as fair- and free-trade agreements, foreign direct investment in under-developed and developing nations, and discussions of international law. These strategies have been aimed at solving the issues of injustice, market failures, and poverty in the world. As communities across world have moved almost inevitably toward a globalized economy for the past twenty (with, of course, a fair share of missteps), critics of globalization argue that the issue of environmental sustainability has fallen to the wayside. While the transition to the globalized economy has occurred rather quickly, the transition to a sustainable economy, or an economy in which “nature’s resources must only be used at a rate at which they can be replenished naturally,” has not kept pace (Eriksson and Andersson 2010: 5). Thus, the integration and harmonizing of the world that has occurred via globalization has had mixed consequences in terms of the environmental sustainability.

One theory regarding globalization that has led to the neglect of the sustainability paradigm comes from economist Martin Khor, who argues that the globalization paradigm should advocate “liberalization of international markets…and granting rights to corporations to…invest in any of their choice without restraints or conditions. Governments should not interfere with the free play of the market...” (Khor 2001: 209). The environmental issue here lies in the implementation of this theory, since governments of developing nations often seek to benefit their own private commercial interests and promote foreign direct investment in their economies by turning a blind eye to violations of environmental standards and regulations. Furthermore, foreign investment in
transportation and energy sectors (as is common in developing economies) has largely negative environmental consequences, and because of globalization and the proliferation of transnational corporations, we often see the “spatial separation of action and impact from responsibility” (Speth 2003: 13). The environmental abuse a corporation may bring via capital investment in a developing nation may be doing more harm than good, especially when the government attempts to commodify its natural resources and privatize them to lure FDI (a prime example being Bolivia’s attempt to privatize the water system in 2000, leading to mass protests, riots in Cochabamba, and a lawsuit with the American corporation that was given the rights).

Globalization is generally agreed upon as joining of the world’s different cultures, economies, and ideologies—a process that will ideally lead to a more egalitarian future. In terms of environmental sustainability, much like economic development, however, there are many kinks in the globalization ideology that need to be remedied via a shift in the environmental and development paradigms toward a more sustainable future. These kinks are evident in the historical policies of the World Bank, International Monetary Fund, United Nations, and World Trade Organization.

*International Environmental Policies and Treaties*

As Caldwell (1996) indicated, two developments were needed before an international environmental movement could affect positive change: environmental policies would need to legitimized on a national level, and the world needed to gain a unified concern for the issues of climate change in the world. There exists, however, significant differences in economies’ global and domestic mindsets that will require a
paradigm shift in order to begin fixing environmental issues. While citizens generally understand the environmental issues that affect their country daily, it is more difficult to often consider the “more chronic, more remote (at least in the North), and more technically complicated and thus more difficult to understand” issues that plague the world as a whole (Speth 2003: 6). The dichotomy between global and domestic environmental mindsets adversely affects public awareness and support of environmental initiatives. As Leiserowitz, et al (2010) indicated, Americans are generally knowledgeable of climate change issues that affect their daily lives, but are relatively less informed regarding the environmental issues that transcend national borders.

Domestic agendas for environmental issues could be addressed primarily through regulatory means, but the global agenda requires major expenditures by governments, including development assistance to the poorer countries. Unfortunately, development assistance has gone down and not up (Speth 2003: 8). Further, the pressure to develop that Western (i.e. developed) nations put on smaller economies is often catastrophic to these developing nations from both economic and environmental standpoints. The classic case in-point is the small island nation of Nauru. Nauru survived on natural and cultivated crops traditionally, was isolated for the most part from Western contact, but was colonized by Germany and later Australia, New Zealand and Great Britain following World War II. An abundance of Phosphate, used in commercial fertilizers, was discovered on Nauru, and these nations granted major companies the right to mine without considering the sustainability of the island’s resources. As such, Nauru ran out of Phosphate resources in the early 2000s, and since the process of mining the phosphate is so detrimental to the land that nothing can grow or inhabit the land after, indigenous animals became extinct, nearly
all vegetation was lost, and the vast majority of food on the island must be imported (Gowdy and McDaniel 1999: 3). This has led to a 95 percent obesity rate and 50 percent diabetes rate amongst the population of Nauru. While Nauru’s natural capital has been depleted, however, it has built up a stock of machinery (from mining) that has experienced little to no deterioration following the end of phosphate mining. Thus, the environmental and economic abuse of developing nations by the Western world, as Gowdy and McDaniel (1999) suggest, is compatible with the neoclassical definition of economic sustainability (4).

International organizations such as the International Monetary Fund, the World Bank, and the United Nations have pledged to protect the economic and environmental resources of developing nations such as Nauru. As is the case with all international policies, international environmental law is plagued by vague terms, lax enforcement, and underfunded support mechanisms (Speth 2003: 9). The past two decades of work has given the world an abundance of scientific research and policy analysis surrounding the issue of climate change (“The Stern Review” is a prime example) that has fueled a myriad of international conferences, action plans, treaties, NGOs and global (often corporate) environmental initiatives. Still, however, “the results of twenty years of international negotiations are disappointing” in terms of analyzing the efforts of groups such as the IMF, World Trade Organization, and the World Bank (Speth 2003: 9).

Groups such as the World Trade Organization (WTO) have gained significant power over nations in the past decade, yet the WTO has done little to actually address environmental issues. When the WTO came into being in 1994, it was hailed as “as enlightened step toward a new era of global prosperity” by individuals in the business
community, US government, and academia (French 2003: 466). However, “critics charged that the new organization elevated corporate rights to a new plane while devastating local communities and the environment” (ibid). The preamble to the WTO agreement includes, amongst many other of the organizations goals, environmental and sustainable development, as well as analyzing the relationship between trade liberalization and environmental protection and making policy changes that ensure the two are “mutually supportive” (World Trade Organization 1994: 9).

The General Agreement on Tariffs and Trade (GATT) and later the WTO aim to protect the rights of countries to pursue environmental policies that may contradict trading rules otherwise. Rulings have been made, however, that prevent countries from establishing these powers outside of their own national borders, thus destroying any international attempts to curb the negative effects of climate change and ecological abuse. This has been the standard since 1991, when GATT ruled that a US embargo against Mexican tuna violated GATT policy initiatives. The US placed an embargo on Mexican tuna after they discovered Mexico was using nets to fish for tuna that are notorious for also accidental catching or harming dolphins. GATT ruled this a violation on the basis that, since Mexican tuna fishing was taking place outside US waters, the embargo was “tantamount to the United States foisting its environmental laws and values on the rest of the world” (French 2003: 467). This exposed a major flaw environmentally in terms of international protocols regarding trade and ecological sustainability. Particularly troublesome was “the ruling’s failure to acknowledge the right of countries to take action to protect the atmosphere, the oceans, and other parts of the global commons” (ibid). While environmental policy has moved towards focusing on the impact of products through its
entire life cycle (the European Union preventing the dumping of old computers in developing nations via the Basel Convention is a prime example), the historical aversion of international organizations to protecting global public goods is disconcerting, to say the least.

The World Bank and International Monetary Fund (IMF) aim to aid crisis-ridden and developing nations in creating sustainable economic development, but their policies have often detrimental effects on the environmental health of these nations. Originally a bank for the reconstruction of Europe following World War II, the World Bank now functions as a development bank whose goal is to reduce poverty and promote foreign direct investment in developing nations. Tantamount to this goal are structural adjustment policies—or loans the World Bank lends to nations to help alleviate poverty and promote growth. These adjustment loans tend to promote sound financial policies, meaning they encourage cutting expenditures and boosting exports often at the cost of a nation’s natural assets. This can often times undermine the long-term economic and environmental prospects of developing nations (French 2003: 475). Indonesia, for example was granted a loan and encouraged to export palm oil and remove restrictions on foreign investment in that particular area. This, of course, all came at the cost of Indonesia’s rain forests, and the catastrophic wildfires in the late 1990s that ravaged the nation were deliberately set to clear land for foreign-owned oil palm plantations (ibid). More recently, the World Bank came under fire for approving a multi-billion dollar loan to build a coal-fire power plant in South Africa, which will undoubtedly become a major contributor to global warming.

There are cases, however, in which structural adjustment programs have promoted environmentally beneficial policy changes. Case in point is Cambodia, who saw its loans get
suspended by the IMF in 1997 when government officials were awarding logging concessions to foreign firms that threatened to open up the country’s entire remaining forest area to exploitation—while funneling millions of dollars into bank accounts of corrupt officials (French 2003: 475). The World Bank has recently vowed to take the environmental impact of these loans into greater consideration in terms of structural adjustment lending. In 1999, however, an internal review found that less than 20 percent of the loans included environmental goals (down from 60 percent in 1993) (Dunne 1999). While the IMF and World Bank have the power to set the new rules for the global economy, there currently exists too much emphasis on encouraging limitless economic gains and not enough on harnessing what is the most beneficial for the sustainability of our planet.

In the early 1990s, the United Nations established both the U.N. Environment Programme (UNEP) and the United Nations Framework Convention on Climate Change (UNFCCC). The UNEP’s goal was to encourage commercial banks to incorporate environmental considerations into their lending programs (French 2003: 478). While over 150 banks in more than 40 countries signed onto the initiative, UNEP has not been entirely transparent in where its priorities lie; several of the signatories, in fact, were part of a Chinese bond offering that helped finance the Three Gorges project, which has caused soil erosion, water degradation, and endangerment of wildlife (Hill, et al 1997: 5).

Concerns about environmentally sustainable development were reintroduced based on findings in a United Nations Development Programme report that less developed nations will be less able to cope with climate change issues and are more subject to severe climate catastrophes than advanced nations. The report also suggested that less developed nations are impacted “through climate crises in a manner inversely related to their relative
contribution to greenhouse gas accumulation (compared with industrial nations)” (United Nations Development Programme 2007). Portions of these findings were the foundation for nations ratifying the Kyoto Protocol in 2005. Based on UNFCC negotiations in 1990, the Kyoto Protocol became effective in February 2005, when 55 nations (representing approximately 55 percent of total carbon dioxide emissions) ratified it (Andersson et al 2010: 82). The protocol defined each nation’s individual emissions targets, and as of 2009, 183 nations had ratified the protocol (ibid). Notable, however, is that the United States chose not to ratify the Kyoto Protocol, citing numerous reasons, including the fact that the protocol did not meet the criterion described in the Byrd-Hagel resolution regarding developing nations making binding commitments for emission trading (Harrison 2007: 103). Harrison (2007) also cites that the Bush administration was led by a President whose wealth was in oil, and a vice president (Dick Cheney) who headed up a large oil firm (Haliburton) (106). During a presidential debate in 2000, Bush perpetuated this idea. When asked what he would do about the issue of global warming, Bush responded:

“I’ll tell you one thing I’m not going to do is I’m not going to let the United States carry the burden for cleaning up the world’s air, like the Kyoto treaty would have done. China and India were exempted from that treaty. I think we need to be more even-handed” (Singer 2009)

The goal of the Kyoto protocol is to reduce emissions of six greenhouse gases by five percent from their 1990 levels. (Andersson et al 2010: 82). The protocol authorizes three mechanisms that should facilitate trade and sustainable between its members. The mechanisms include emission trading (countries may trade emissions with other countries according to their quotas), joint implementation (countries can receive emission reduction
credits on the basis of specific projects that reduce emissions in another country), and clean development mechanisms (or projects that take place in a country that is not specified in the Kyoto protocol (aimed at developing countries) and receive reductions in emission targets) (ibid).

The protocol achieved minor successes in terms of reducing emissions from its 1990 base year. As a World Bank (2010) report indicated, as well, the next Kyoto Protocol (the current protocol expires in 2012) must offer financial support to developing nations to help them adapt to climate change. The report also agrees with the United Nation's (2007) report that developing nations are particularly in need of aid given they are impacted through climate change inversely in terms of their contribution to greenhouse gases. While the Kyoto Protocol is definitely a step in the right direction, international environmental institutions will need to be strengthened alongside economic institutions to ensure a sustainable future economy.

*Future Policies Surrounding Ecological and Economic Sustainability*

Establishing an ecologically sustainable, global economy will require a major paradigm shift in terms of how economies define growth. From a theoretical standpoint, neoclassical economics assumes that economic growth and success must be directly tied to growth in material throughput (the usage of capital resources, natural or man-made). In the *de-growth* theory, one of the keys to creating sustainable economic and ecological growth for future generations lies in the idea of decoupling—or ending the neoclassical assumption that economic growth and material throughput must be positively related (Martinez-Alier *et. al* 2010: 1741). As detailed by Martinez-Alier *et. al* (2010), sustainable de-growth rejects the “promethean notion of chrematistic growth,” and encourages a
“society built on quality rather than on quantity, on cooperation rather than on competition...humanity liberated from economism for which social justice is the object” (1741, 1743).

At the core of the de-growth movement is the need to re-imagine our consumer-cultures as smarter, more economically just, and more cooperative societies. Such a society is surely more conducive to the increasingly global economic environment, but it is important to note that proponents of the de-growth movement have a rather nihilistic outlook in regard to traditional sustainable development. Martinez-Alier et al. (2010) point out that de-growth proponents encourage forced de-growth, since “in the eyes of de-growth proponents, economic growth, even if disguised as sustainable development, will lead to social and ecological collapse” (1744). Further, when considering the political feasibility of the de-growth movement, Robert Ayers (2008) remarked “none of the important economic actors, whether government leaders or private sector executives, has an incentive compatible with a [de-growth] policy” (290). Although the de-growth movement encourages a smarter, more sustainable theory of how economies can fundamentally continue to grow, it is an undesirable, unfeasible plan in an political-economic climate such as the United States, where “hardly anything is more fatal in Washington D.C. than having too many to priorities. In the battle for attention, environment and development objectives have typically lost out” (Speth 2003: 13).

One the other hand, Peter Singer, a professor of bioethics a Princeton University, offers a more fleshed-out plan to create an ecologically sustainable, global economy called the “One Person, One Share” proposal. In contrast to the Kyoto protocol (which focused on lowering the level for developed nations 5 percent below 1990 levels), Singer’s proposal
focuses on emissions for the entire planet in an effort to stabilize them (Singer 2009).

Using the 1996 levels of CO2 emissions and population projections for 2050 as precedents, Singer’s proposal allocates each person on the planet 1 metric ton of carbon (or 3.7 tons of carbon dioxide) per year (Singer 2009). In terms of actual emissions for nations, Singer concludes that the United States (responsible for about 30 percent of CO2 emissions but only five percent of the world’s population) produced 5.61 tons of carbon per person per year in 2004, while China produced 1.05, and India produced 0.34 tons (Singer 2009).

Under Singers proposal then, India would be able to increase its emissions three-fold, China would need to stabilize, and the United States would have to reduce its emissions to one-fifth of present levels (Singer 2009).

In order to reach these levels, Singer advocates an emissions trading market, in which industrialized nations that were forced to cut back drastically on emissions will be able to purchase “a transferable quota to produce greenhouse gases at a much cheaper rate from developing nations that have a surplus of per capita atmospheric sink usage than it would cost them to produce it themselves” (Singer 2009). In other words, “if you can buy something more cheaply than you can produce it yourself, you are better off buying it than making it” (Singer 2009).

While the “One Person, One Share” principle is likely to be less harsh on industrialized nations than the historical principle behind it, Singer fails to address the moral hazards of emissions trading markets. As Spash (2009) points out, offsets for pollution allows people to maintain their energy and material-intensive lifestyles rather than reducing their own pollution. “The rich North and South can continue unchanged by placing the burden of emissions control on the poor South. The poor sell cheaply...and are
easily exploited by the powerful for their own ends when the dollars start flowing” (Spash 2009: 1). Further, emissions trading markets crowd out non-economic motivations for valuing the environment:

“A naïve expectation is that adding extrinsic market incentives to an activity for which people are intrinsically motivated should further enhance it. However, a growing body of theoretical and empirical studies demonstrate that that extrinsic incentives can crowd-out the intrinsic motivations which underlie voluntary actions....This means the introduction of an ETS [emissions trading system] may result in individuals ceasing their voluntary efforts. If the incentives and overall reduction targets of the ETS are weak (and initially, they probably will be), it may cause some individuals to increase their net emissions.” (Spash 2009: 2)

Public policies should, according to Spash, crowd-in these intrinsic motivations. The appropriate institutional setting for creating an ecologically, economically sustainable world may be one of shared responsibility. A forum that allows for expression of social values, where voluntary efforts run parallel (and not against) government schemes would be most fruitful (Spash 2009: 2).

Political feasibility, social values, and government schemes will all play a part in the forming of the next Kyoto Protocol, which will run from 2012 onward. It would be unfair to deem the previous Kyoto protocol a complete success or a complete failure. As the UNFCCC admits, “the Kyoto Protocol is generally seen as an important first step towards a truly global emissions reduction regime” (UNFCCC 2011, italics mine). Being the first step, the Kyoto Protocol has done an admirable job at raising initial global awareness of the climate
change issue. With the end of the first Kyoto Protocol commitment period, however, countries and global organizations must realize that more stringent emissions reduction frameworks must be drafted in order to take the next step in preventing climate change. Duroy (2011) points out the need for a global paradigm shift in terms of ecological sustainability if countries are to stymie climate change before it barrels out of control. This means a shift from the eco-efficiency model (where sustainability is defined as getting more out of natural resources) that characterized environmental sustainability since the 1970s to an ecological citizenship model—or a model that rejects the consumer culture and focuses on creating global citizens that have the knowledge, power, and altruism to support global legislation for environmental sustainability (Duroy 2011: 10). This re-imaging how communities and economies are built will best serve as a foundation for major environmental change in the future.

*Concluding Remarks*

Though the “Stern Review” had a definite impact on the global environmental outlook, the “urgent global response” that Nicholas Stern advocated is yet to arrive. Keeping Stern’s findings and the evolution of the global economy in mind, this paper sought to analyze the protocols of major international organizations and examine possibilities for future economic prosperity while maintaining environmental sustainability.

To answer the question at the outset of this paper clearly, but briefly, both major economies and developing nations must accept climate change and global warming as absolute truths, educate their societies on these issues, and establish local *and* global legislation to combat environmental degradation. This lofty, long-term goal can only be
accomplished through a paradigm shift from consumer culture to an ecological citizenship model, as Duroy (2011) outlines. Societies will need to truly understand the seriousness of the environmental crisis (and the near consensus surrounding the scientific evidence) at hand before legislation ceases to crowd out pro-social, environmentally friendly behavior. This will require a significant degree of political transparency—that is, governments will need to be clear in its goal to eradicate excess greenhouse gases and pollution, and it will need to enforce its legislation alongside pro-social behavior.

Research in the area of ecological economics in the globalized world would benefit from a further discussion as to how governments can go about said legislations. Inevitably, international organizations will need to take the lead in this movement. Defining what international organization can and should take the lead, as well as how such regulations can be enforced at the international level, and what real long-term goals can realistically be implemented would greatly enrich this discussion of climate change on the global front. Though these are very long-term goals, the threat of global warming will become real quicker than Western culture may realize: African nations are already suffering due to our ecological footprint. Thus, the time for international organizations, national governments, and the global community to act is now.

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Recent Evidence in Support of Oligopolistic Cooperation:  
A Network Approach

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Abstract: This paper seeks to retest the oligopolistic cooperation hypothesis of market structure from the Centralized Private Sector Planning literature, using 2010 data on corporate board membership and recent advances in social network analysis. Centrality measures are calculated based upon the corporate governance network emerging from common board membership on Fortune 100 firms. The findings herein suggest that not only does oligopolistic cooperation continue to characterize the US economy, but directors from the finance and insurance sector occupy a significantly more central role in the planning process than those of other industries.

It has long been the province of institutional economics to address the question: what is the nature of the firm in the context of evolutionary change? One contribution towards addressing this issue remains the recognition that firms operate not as isolated producers working to meet the demands of the market, but rather operate in concert to the needs of the “machine process” (Veblen, 1904). As the machine process grows in scope and complexity it eclipses the market as a social provisioning process. Pecuniary interests vested in the integrated industrial system demand a minimal degree of certainty regarding the validation of financial interests, which necessitates an institutional framework capable of planning for such contingency. We know this institution as the modern corporation.

This paper focuses on the manner in which corporations coordinate efforts for their mutual benefit. The notion of Centralized Private Sector Planning (CPSP) emerges in the institutional economics literature to explain the “opaque fact” that the modern industrial production system constitutes a network of interlocking institutional arrangements, whereby its constituent elements play some part in the production of financial profits for the whole (Munkirs, 1985; Munkirs and Knoedler, 1987). This paper seeks to reexamine
one implication of the CPSP literature: that the economy can best be described as a system of *oligopolistic cooperation* (Munkirs and Sturgeon, 1985).

While an analysis of all categories of institutional interlocks presented in the CPSP literature is beyond the scope of this paper, it shall be argued that board of director interlocks alone provide sufficient evidence that oligopolistic cooperation constitutes the essential structure of the economy today. Moreover, the centrality of financial and insurance entities continues to exert a considerable degree of influence over the planning process amongst America’s largest corporations. To establish the empirical basis for the assertions listed above, this paper employs recent methodological advances in the area of social network analysis to construct the Fortune 100 corporate governance network. The results provide some quantitative measure of power and influence vested in the corporate elite.

**Methodology and Results**

Social network analysis (SNA) provides a host of techniques that allow the researcher to investigate the institutional complexity involved in a variety of systems. SNA rejects reductionist approaches that focus in the individual, suggesting instead the ties between individuals (nodes) serve as the fundamental unit of analysis. Furthermore, the approach recognizes that complex networks of connections give rise to emergent structures, which then become the basis for analysis. Given a set of nodes, one may formalize the connections between each element of $N$ with an *adjacency matrix* $X$. The resulting $N \times N$ matrix contains null values along its principal diagonal, and a binary value

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43 For a comprehensive introduction to the literature, see Wasserman and Faust (1994)

44 In the SNA literature, nodes refer to the element of the network such as actors, agents, etc.
indicating whether a tie between the ith and jth element of N exists along its off diagonals. Once populated, the adjacency matrix allows the researcher to calculate a number of measures for *network centrality*\(^{45}\). The centrality of a given node in terms of the network may be used to make inference regarding its relative importance, influence, status or prestige (Wasserman and Faust, 1994). A more formal definition for centrality, as well as the measures employed in this study, shall be offered below. For now the task remains to introduce the manner in which this study constructs the network of interlocking corporate directorates.

This paper focuses on the Fortune 100 list of American corporations for 2010 as well as each firm’s respective board of directors (BOD)\(^{46}\). Taking the set of corporations and board members together as our list of nodes allows us to examine which board members provide a link between firms through common BOD membership. Three networks emerge from the data that are of interest to this paper. First, the total set of directors and corporations constitutes a network wherein the largest corporations in America are connected *indirectly* through common board members. In total, there are 1129 nodes (directors plus firms) with 1179 ties linking them together. Since the ties are greater then nodes, we observe that some directors serve on more than one board. For example, Richard Myers sits on the boards of both United Technologies and Northrup Grumman. While this network is interesting insofar as one may examine which directors serve as connections between different corporate boards, measures of centrality lose meaning since each corporation will have a degree centrality measure equal to the number

\(^{45}\) All measures of centrality and graph layouts were obtained using two programs: Gephi and UCINET. Gephi is open-source and available at www.gephi.org

\(^{46}\) Firm data were gathered from Fortune’s website, while board membership was gleaned from Reuters news service and annual reports for 2010.
of directors on its board. We are more interested in the *indirect connections* implied by interlocking directorates, which will give us some sense of the centrality of each Fortune 100 firm.

The second network of interest emerges as we limit our set of nodes to the list of Fortune 100 firms, then cross-tabulate each element of the set according to common board membership. Excluding firms for which no common membership exists with another corporate board results in 82 firms defining a square matrix, populated with the number of direct BOD interlocks in off-diagonal cells. A graphical representation of the results in Appendix 1 is shown in Figure 1 below.

**Figure 1:** Network of Fortune 100 firms joined by common membership on boards of directors (excluding isolates). Nodes weighted by # of direct interlocks.

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47 See appendix 1 for full matrix.
A cursory glance at this network illustrates a few interesting characteristics. First, we note the distribution of degree centrality – the number of direct BOD interlocks between firms – is asymmetric. That is, some firms are more connected than others. In fact, only 82% of Fortune’s 2010 list of the largest American corporations are connected to at least one other corporation. The following table summarizes the distribution of degree centrality amongst firms shown in Figure 1:
Table 1: Frequency distribution of degree centrality for firms in Figure 1

<table>
<thead>
<tr>
<th>Degree Range</th>
<th>Frequency</th>
<th>Cumulative %</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-2</td>
<td>23</td>
<td>28.05%</td>
</tr>
<tr>
<td>2-4</td>
<td>20</td>
<td>52.44%</td>
</tr>
<tr>
<td>4-6</td>
<td>24</td>
<td>81.71%</td>
</tr>
<tr>
<td>6-8</td>
<td>12</td>
<td>96.34%</td>
</tr>
<tr>
<td>8-10</td>
<td>1</td>
<td>97.56%</td>
</tr>
<tr>
<td>10-12</td>
<td>2</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

Source: Based upon centrality measures calculated in Gephi

It is clear from the table shown above that most of the firms are connected to six or less other firms and only 18% have direct BOD interlocks with more than six. These highly connected companies include the likes of J.P Morgan Chase, GE, Goldman Sachs, AIG, and IBM, to name a few. In other words, the corporations that typically register in our minds as powerful or influential are central to the network when measured in terms of direct BOD interlocks. However, degree centrality alone does not provide us with enough information to determine how important or influential corporations are within the totality of the network. For instance, we may be interested in the relationship between two corporations that are indirectly connected – e.g. J.P. Morgan Chase is one degree removed from Citigroup via common directors on the board of Comcast. From the perspective of the network, interaction between these two firms depends, in part, on Comcast.

The SNA literature defines the sort of network role implied in the Comcast example as “betweenness centrality” (BC) (Anthonisse, 1971; Freeman, 1977; Pitts, 1979). More recently, Wasserman and Faust (1994, pp. 189-190) emphasize Shaw’s (1954) recognition that nodes serving as bridges between the interaction of other nodes, assume higher degrees of “stress,” thus we attribute importance to such position through an index of BC\textsuperscript{48}. A node’s “betweenness” is the sum of probabilities that it will lie on the shortest path

\textsuperscript{48} See Appendix 2 for a formal definition of betweenness centrality
between any two nodes in the network. These probabilities are then normalized to range between 0 and 1. Calculating BC measures for each of our 82 firms allows us to scale each node and identify which firms assume more of this new measure of centrality.

Figure 2: Network identified in Figure 1 where nodes are weighted by betweenness centrality.

Source: See Figure 1

BC measures range from 0 to .1180, with a mean and median of .0285 and .0236 respectively. As with degree centrality, the distribution of BC scores are skewed towards the upper-tail of the distribution, suggesting that a minority of firms are well positioned to influence the interaction between two other firms that otherwise lack common ties. An
examination of Figure 2 yields the observation that membership among the elite subset of high BC firms includes many financial or insurance firms. Based upon the role suggested in the CPSP literature for the CPC (Munkirs, 1985) we would expect banks and insurance companies to be central in this regard. Of the 82 firms that comprise this network, 16 represent the finance and insurance (FI) sector. On average, FI firms possess a BC measure of .0350 which is statistically different than the unrestricted set average of .0285 at all levels of significance. These results suggest that banks and insurance companies are centrally positioned, through interlocking BODs, to affect the overall corporate governance of America’s largest companies.

Thus far our discussion has considered networks that emerge from connections between directors and firms. A third and final network of interest arises from the implicit ties between directors that serve on common boards. In similar fashion to the approach used to develop the network of interlocking firms described above, we arrange our set of nodes to include only the 1029 directors. The corresponding adjacency matrix will also be square and contain an array of binary values indicating whether a tie exists between two directors based upon co-membership on Fortune 100 boards. This approach has the advantage of allowing us to examine the structure of the corporate governance community, by drawing direct connections between those that sit face-to-face in board meetings.

Figure 3 below offers a visual overview of the implicit community of Fortune 100 corporate directors. For the sake of clarity, isolate groups of directors have been excluded. Given an average degree centrality measure of 14 as well as the relatively large number of

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49 Excludes health insurance companies
50 Due its size (1029x1029) the paper excludes this adjacency matrix. It is available upon request for those who wish to reproduce these results.
directors, it is not surprising that all 787 directors are connected by a total of 5395 individual links. To illustrate visually the distribution of FI vs. non-FI directors, we color each node dichromatically: grey for FI directors, white otherwise.

**Figure 3**: Network of directors affiliated by common board members. Nodes weighted by degree centrality (n=787, edges = 5395). To zoom in at high resolution this image may be viewed at: [http://zoom.it/mTYR](http://zoom.it/mTYR)
The distribution of centrality measures for the affiliation network of corporate
directors is summarized below:

Table 2: Summary statistics for affiliation network of Fortune 100 board members. * indicates that F/I
directors are significantly different than all directors in terms of mean centrality.

<table>
<thead>
<tr>
<th>Nodes</th>
<th>Stats</th>
<th>Degree</th>
<th>BC</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Directors</td>
<td>Mean</td>
<td>13.71029</td>
<td>0.004216</td>
</tr>
<tr>
<td></td>
<td>Median</td>
<td>12</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Skewness</td>
<td>2.051343</td>
<td>3.654606</td>
</tr>
<tr>
<td></td>
<td>SD</td>
<td>5.791978</td>
<td>0.012239</td>
</tr>
<tr>
<td>Finance / Insurance Directors</td>
<td>Mean</td>
<td>16.61353*</td>
<td>0.008632*</td>
</tr>
<tr>
<td></td>
<td>Median</td>
<td>13</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Skewness</td>
<td>1.115481</td>
<td>2.152599</td>
</tr>
</tbody>
</table>

Overall the centrality of directors follows an asymmetric distribution, with a
minority of directors possessing high degrees of centrality with respect to the rest of the
group. Similar to the network of firms shown in Figure 1, a large proportion of these
central directors sit on the nations largest financial / insurance firms. As shown in Table 2
directors from the FI sector are more central –both in terms of degree and BC- on average.
While the FI sector represents only 26% of all directors in the network, their directors are
15% more likely to have a higher than average degree of connectedness when compared to
the group as a whole. Similarly, these data suggests that FI directors are 11% more likely
to have a higher than average BC measure.

To further emphasize the importance of the banking and insurance industry with
regard to the overall structure of the network let us consider the ego network of one
director in particular: William H. Gray, III. Briefly defined, an ego network captures the
connection any one individual may have as a subset of the entire network. For networks as
large and as connected as that depicted in Figure 3 it quickly becomes difficult to tease out
which nodes serves as indirect connections for any one subject. An ego network allows us
to specify the degree of separation – say two – and create a new network with only those links that satisfy the condition. This allows us to quickly identify the characteristics of any particular element. Figure 4 shows the ego network for Mr. Gray to the extent that we capture not only his direct ties – those that sit on common boards with him – but also the indirect ties that result from Gray’s board colleagues’ other governing obligations.

Gray serves on four Fortune 100 boards: JP Morgan Chase, Pfizer, Prudential Financial, and Dell. The members of these boards are circled and enumerated in Figure 4 as they are listed above. Given the direct ties of the members on these four boards, Gray extends his professional network to a total of 186 corporate directors. In other words, Gray is either directly or indirectly connected to 24% of all other corporate elites governing America’s 100 largest corporations. If it were the case that Gray is not unique in this regard, one may observe that a very small minority could potentially have a rather large impact on the administration of the commanding heights of our economy.

**Whither Oligopolistic Cooperation?**

While this study excludes most of the institutional arrangements – e.g. stocks, bonds, trustees and transfer agents, etc. – employed in the CPSP literature, the high level of BOD interconnectedness offers substantial evidence that oligopolistic cooperation continues to describe the structure of the modern economy. Extending this analysis to include such institutional ties as stock control, bond issues, balance sheet obligations between firms, and political contributions, only increases the complexity and structural interdependence of today’s machine process. Moreover, the decision to exclude 18 of the Fortune 100 firms from the analysis above did not result from the recognition that they represent some bastion of free-market independence. Rather, their ties to the network
are not realized at the depth of Fortune 100 directors. Isolate periphery Fortune 50 firms find their links as directors from the Fortune 100 firms are added, and so with the relationship between Fortune 100 and Fortune 200 directors. In essence, establishing the
true nature of industrial concatenation is a recursive problem beyond the scope of this paper.

Fortunately, it is unnecessary to perform such a task to simply retest the notion that corporations operating in an oligopolistically cooperative environment exhibit a high degree of administrative interdependence. The structural reality of the corporate governance community in 2010, demands that William H. Gray, Samuel Nunn, and Richard Myers cooperate. “For these members to act as if these intradependencies did not exist would be both logically and practically indicative of irrational tendencies” (Munkirs and Sturgeon, 1985)⁵¹.

The methods employed in the preceding analysis are not new to institutional economics. Hayden’s application of graph theory to the social fabric matrix approach makes explicit the promise of network analysis in illustrating the key structural aspects of the social provisioning process (Hayden, 1982a; Hayden, 1982b; Hayden, 1986; Hayden and Stephenson, 1995). More recently, Hayden et al (2002) employs recent advances in the SNA literature that takes centrality as a measure of power to identify networks of corporate dominance. Yet as Hayden (2002, pg. 695) argues, there remains much work in the area of network analysis on corporate power blocs, given its ability to illuminate vested interests at work and the necessity for democratic, institutional adjustment.

**Conclusion**

This paper has presented recent evidence in support of the oligopolistic cooperation view of market structure. Recent advances in social network analysis methods were employed to construct the network of Fortune 100 interlocking boards of directors and

---

⁵¹ Gray, Nunn and Myers are at most indirectly related through the boards of: Prudential Financial, Chevron, Northrup-Grumman and Dell.
develop two indices for network centrality: degree and betweenness. These results illustrate the extent of administrative interdependence that characterizes the so called commanding heights of the economy. It has been demonstrated that the pecuniary employments remain central to planning process of the modern production system, and hint towards further evolution in the same direction.

Appendix 1: Adjacency Matrix for 82 Overlapping BOD of Fortune 100
<table>
<thead>
<tr>
<th>Id</th>
<th>Firm Name</th>
<th>Id</th>
<th>Firm Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Abbott Laboratories</td>
<td>49</td>
<td>Kroger</td>
</tr>
<tr>
<td>2</td>
<td>Aetna</td>
<td>50</td>
<td>Lockheed Martin</td>
</tr>
<tr>
<td>3</td>
<td>Allstate</td>
<td>51</td>
<td>Lowe's</td>
</tr>
<tr>
<td>4</td>
<td>American Express</td>
<td>52</td>
<td>Marathon Oil</td>
</tr>
<tr>
<td>5</td>
<td>AIG</td>
<td>53</td>
<td>McKesson</td>
</tr>
<tr>
<td>6</td>
<td>Apple</td>
<td>54</td>
<td>Medco Health Solutions</td>
</tr>
<tr>
<td>7</td>
<td>ADM</td>
<td>55</td>
<td>Merck</td>
</tr>
<tr>
<td>8</td>
<td>AT&amp;T</td>
<td>56</td>
<td>MetLife</td>
</tr>
<tr>
<td>9</td>
<td>Bank of America Corp.</td>
<td>57</td>
<td>Microsoft</td>
</tr>
<tr>
<td>10</td>
<td>Berkshire Hathaway</td>
<td>58</td>
<td>Morgan Stanley</td>
</tr>
<tr>
<td>11</td>
<td>Best Buy</td>
<td>59</td>
<td>News Corp.</td>
</tr>
<tr>
<td>12</td>
<td>Boeing</td>
<td>60</td>
<td>Northrop Grumman</td>
</tr>
<tr>
<td>13</td>
<td>Cardinal Health</td>
<td>61</td>
<td>PepsiCo</td>
</tr>
<tr>
<td>14</td>
<td>Caterpillar</td>
<td>62</td>
<td>Pfizer</td>
</tr>
<tr>
<td>15</td>
<td>Chevron</td>
<td>63</td>
<td>Procter &amp; Gamble</td>
</tr>
<tr>
<td>16</td>
<td>Cisco Systems</td>
<td>64</td>
<td>Prudential Financial</td>
</tr>
<tr>
<td>17</td>
<td>Citigroup</td>
<td>65</td>
<td>Rite Aid</td>
</tr>
<tr>
<td>18</td>
<td>Coca-Cola</td>
<td>66</td>
<td>Safeway</td>
</tr>
<tr>
<td>19</td>
<td>Comcast</td>
<td>67</td>
<td>Sprint Nextel</td>
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<td>20</td>
<td>ConocoPhillips</td>
<td>68</td>
<td>Supervalu</td>
</tr>
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<td>21</td>
<td>Costco Wholesale</td>
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<td>Sysco</td>
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<td>22</td>
<td>Dell</td>
<td>70</td>
<td>Target</td>
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<td>Delta Air Lines</td>
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<td>24</td>
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<td>74</td>
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<tr>
<td>27</td>
<td>Exxon Mobil</td>
<td>75</td>
<td>UnitedHealth Group</td>
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<tr>
<td>28</td>
<td>Fannie Mae</td>
<td>76</td>
<td>United Technologies</td>
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<td>29</td>
<td>FedEx</td>
<td>77</td>
<td>Valero Energy</td>
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<td>30</td>
<td>Ford Motor</td>
<td>78</td>
<td>Verizon Communications</td>
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<td>31</td>
<td>Freddie Mac</td>
<td>79</td>
<td>Wal-Mart Stores</td>
</tr>
<tr>
<td>32</td>
<td>General Dynamics</td>
<td>80</td>
<td>Walt Disney</td>
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<td>33</td>
<td>General Electric</td>
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<td>WellPoint</td>
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<td>34</td>
<td>General Motors</td>
<td>82</td>
<td>Wells Fargo</td>
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<td>35</td>
<td>Goldman Sachs Group</td>
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<td>Hess</td>
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<td>Hewlett-Packard</td>
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<td>40</td>
<td>Honeywell International</td>
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<td>Humana</td>
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<td>42</td>
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<td>43</td>
<td>International Assets</td>
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</tr>
<tr>
<td>44</td>
<td>IBM</td>
<td></td>
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</tr>
</tbody>
</table>
### Appendix 2: Centrality Measures

Wasserman and Faust (1994) define the centrality measures used in the preceding analysis as follows:

**Degree Centrality:**

Let $C_D(n_i)$ define an index of actor-level degree centrality, $\forall n \in N$; where $N = \{n_1, n_2, n_3, \ldots, n_g\}$.

Further define $X$ as the sociomatrix (or adjacency matrix) for the relation between $g$ nodes in $N$, such that each element of $X$ expresses the value of the tie between the $i$th and $j$th element of $N$ as $x_{ij}$. Then,

$$C_D(n_i) = \sum_j x_{ij}$$

**Betweenness Centrality:**

Let $C_B(n_i)$ define an index of actor-level betweenness centrality, $\forall n \in N$; where $N = \{n_1, n_2, n_3, \ldots, n_g\}$.

Let $g_{jk}$ be the number of ties between the $j$th and $k$th actor. If all ties are equally likely to be chosen as the path between the $j$th and $k$th actor, then the probability that any given path will be chosen is simply $1/g_{jk}$. Further, let $g_{jk}(n_i)$ define the number of paths on which a given $i$th element of $N$ serves as intermediary between the $j$th and $k$th actor. Then,

$$C_B(n_i) = \sum_{j \neq k} g_{jk}(n_i) / g_{jk} \cdot$$

Alternatively to normalize the index between 0 and 1 we express:
\[ C'_g (n_i) = C_g (n_i) / [(g - 1)(g - 2) / 2] \]

References


Reuters: Stocks & People. [http://www.reuters.com/finance/stocks/](http://www.reuters.com/finance/stocks/) (accessed between March 15\textsuperscript{th} and April 10\textsuperscript{th} 2011)


Ludwig Von Mises once wrote: “Economic calculation is the fundamental issue in the comprehension of all problems called economic.” The sentiment of this quote concisely explains what Austrian economics is all about. However, in order to gain a sufficient understanding of the theoretical and historical underpinnings of Austrian economics will require more than a mere quotation. For those with such a penchant to learn more about Austrian economics, Thomas C. Taylor’s book, *An Introduction to Austrian Economics*, is a great place to start.

At its core, the book offers a very intelligible explanation of what Austrian economics is. It also waxes historical, by elucidating on some of the great thinkers who contributed to the Austrian School’s foundations. The author does, however, presume that readers have a certain level of economic history under their belt, but overall the book is suitable for a wide range of economists, including undergraduate students interested in Austrian economics.

The book begins by briefly explaining the divergence of thought in economics that began in the 18th century. Late in the 19th century, in Western Europe, there were two growing schools of economic thought that were competing with each other: the German Historical School and the Austrian School. Essentially, the German Historical School believed that economic knowledge could be discovered through an empirical methodology of studying economic history. On the other hand, the Austrian School believed that this was not possible and they asserted that the key to discovering economic knowledge was through purely theoretical analysis.

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Readers quickly learn that the Viennese political economist, Carl Menger, is the father of the Austrian School. He concocted the subjective theory of theory, which shook up the classical economists belief that value was intrinsically objective. In fact, the fourth chapter of the book is dedicated to exploring the subjective theory of value in scant detail. This chapter could easily include more detail, which would provide readers with a richer understanding of the significance of this theory. Within this chapter, there is also discussion on the principle of marginal utility and on how value, exchange, and money relate to each other. Despite its minor flaws, readers interested in the origins of modern economics will certainly find this chapter entertaining.

Early in the book, it’s also noted that Friedrich von Wieser and Eugen von Bohm-Bawerk were also important characters, who would later refine the theory of subjective value. Economic historians will likely remember that Bohm-Bawerk would also create a theory all his own: the theory of capital and interest.

It’s interesting to note that Austrian economists believe that there is no way to measure quantitatively the satisfaction of the actors within an economy. Thus, Taylor asserts the following: “The failure to consider this subjective orientation led to the unfortunate notion of the “economic man,” which depicted every participant in the market economy as relentlessly seeking at every turn to maximize his monetary position.” (pg.49) Taylor informs readers that actors in an economy are actually seeking to maximize psychic or subjective profit, according to the Austrian School.

The contributions of Ludwig von Mises and Friedrich Hayek are mentioned throughout the book as well. In the early twentieth century Ludwig von Mises challenged the theory of socialism on the grounds economic calculations in an advanced economy are too complicated to accurately discern properly. In other words, Mises suggested something that has become a pillar of the Austrian School, i.e., there is inherently a problem of coordination and localized knowledge in planned economies. Taylor sums up the Austrian view on this quite well, when he writes: “Uncertainty is the overwhelming
obstacle that each entrepreneur-producer faces in the market economy, and his attempt to foresee the future is a subjective matter that escapes mathematical equations or formulae.” (pg.32)

Hayek would further elaborate on this problem by describing how the knowledge in the social sciences is different from that in the natural sciences. Taylor puts it as follows: “The knowledge that underlies human decisions and actions is grossly imperfect simply because a significant part of the ‘knowledge’ in the mind of each individual consists of suppositions about the future decisions and actions of other individuals.” (pg.19) These subjective suppositions, according to the Austrian School, simply don’t exist in the natural sciences, hence the Austrian School scorned the use of a scientific approach to economics.

And what does the Austrian School think about money? According to Taylor, “Money is the means by which many desired ends can be achieved.” (pg. 50) However, not all desires can be achieved money, hence the Austrian belief that humans are motivated by more than mere maximization of monetary profits. In other words, it is important within the Austrian framework to avoid confusing money with other economic aims.

Taylor also delves into a nice explanation of the market and how market prices work within the Austrian framework. He does this by walking through the classic explanation for why demand and supply curves have the properties that they do and then he describes the tendency towards equilibrium prices.

According to Taylor, the Austrian economists realized that the actions in the market are not inhuman, nor are they entirely mechanically exploitative. Prices in the market merely represent subjective valuations by participants in the market and are incredibly time sensitive. In other words, actors in a market can change their subjective valuations at a whim depending on other factors that occur over time. Taylor goes on to correctly
assert that in any given voluntary exchange both parties benefit. In other words, “Every exchange requires two mutually benefitted parties.” (pg.58)

In conclusion, this book offers an ample introduction into the world of Austrian economics. Those who know nothing about Austrian economics might be bewildered by some of Taylor’s writing and those who know a fair amount about the history of modern economics might finish the book thirsty for more detail. However, this book is a great way to familiarize or re-familiarize with the Austrian School.
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