HY MINSKY AND I BOTH EMPHASIZED THE MONETARY ASPECT OF KEYNES’S EXPLANATION OF WHY THE ECONOMY DOES NOT AUTOMATICALLY GENERATE A FULL EMPLOYMENT SITUATION. THERE ARE, HOWEVER, A NUMBER OF DIFFERENCES BETWEEN HY’S ANALYSIS AND ARGUMENT AND MY POSITION. THESE DIFFERENCES DEAL WITH DEFICITS, SECURITIZATION, ANTI-INFLATION (AND DEFLATION) POLICY, AND AN AGGREGATE SUPPLY AND DEMAND ANALYSIS THAT IS THE FOUNDATION OF KEYNES’S PRINCIPLE OF EFFECTIVE DEMAND.

CONSEQUENTLY HY AND I WOULD DISAGREE AS TO WHETHER TODAY’S GREAT RECESSION AND THE 1930S GREAT DEPRESSIONS ARE NORMAL AND INEVITABLE FOR THE ENTREPRENEURIAL, MONEY USING SYSTEM WE CALL CAPITALISM.

DEFICITS

HY OFTEN SAID OF ME THAT “DAVIDSON NEVER SAW A DEFICIT THAT HE DID NOT LOVE”. I, IN TURN, CLAIMED THAT HY NEVER SAW A SERIES OF DEBTS OVER TIME THAT HE BELIEVED WOULD ULTIMATELY CAUSE A FINANCIAL CRISIS. I BELIEVED THAT THE FINANCIAL SYSTEM WAS AMAZINGLY STRONG (AT LEAST AS LONG AS GLASS STEAGALL WAS FULLY ENFORCED) AND HY BELIEVED THAT THE FINANCIAL SYSTEM WAS ESSENTIAL VERY FRAGILE.

ACCORDINGLY I WOULD ARGUE THAT FOR A QUARTER CENTURY AFTER THE SECOND WORLD WAR AND ALMOST FOUR DECADES AFTER GLASS STEAGALL THE FINANCIAL SYSTEM GLASS WAS STRONG (THE GLASS WAS HALF FULL OR MORE) WHILE HY WAS ARGUING EVEN DURING THAT PERIOD THAT THE GLASS WAS MORE THAN HALF EMPTY.

SECURITIZATION

MY POSITION WAS THAT SECURITIZATION OF TRADITIONAL ILLIQUID ASSETS WAS A BOMB WAITING TO GO OFF,
while Hy saw securitization as an interesting and useful financial innovation.

UNCERTAINTY

John King, in his History of Post Keynes Economics has written [2002 p. 113]:

“Hyman Minsky’s Post Keynesianism was highly individual, perhaps more so than that of Sidney Weintraub and in quite different dimensions. Minsky had no particular objection to aggregate supply and demand analysis or a tax based incomes policy, but did not regard them as especially interesting or important. He took no interest in the analysis of production, in the operation of product markets or in pricing theory.... Growth without cycles, he believed, was simply impossible... He was even critical of Paul Davidson’s monetary theory..... His [Minsky’s] relations with Weintraub and with Paul Davidson were soured by his dismissive review of the latter’s Money and the Real World (Minsky, 1974). Indeed his [Minsky’s] affinities were with the New Keynesians....”

King quotes a November 19, 1974 letter from Minsky to Weintraub in which Minsky writes:

“I have a serious quarrel with his [Davidson’s] approach, which is the approach adopted by Joan Robinson and Kregel among others. They insist upon defining as a base for their argument a steady growth process and elucidating the circumstances under which the process can be maintained. They also conclude more or less in passing that the maintenance of steady growth is difficult if not impossible under capitalist processes.

“ My perspective is that once you define financial institutions of capitalism in any precise form then the normal path of the economy is intractably cyclical and the problems of macroeconomic theory is to spell out the properties of the cyclical process. Thus much of what is very valid in Paul’s analysis is diminished in significance because of his basic approach....within a cyclical perspective uncertainty becomes operational in the sense the myopic hindsight determines the current state of Keynesian/Robinsonian Animal Spirits; without a cyclical perspective uncertainty is more or less an empty bag” (emphasis added)

It is this last sentence particularly that creates a difficult gap between Hy Minsky’s analysis of financial fragility and the monetary economics of Keynes as I have interpreted it. I believe the concept of ontological uncertainty is at the crux of the unemployment analysis and is not an empty bag.

PRODUCTION AND PRICE THEORY

Following Keynes and my mentor Sidney Weintraub, I have adopted a macroeconomic analysis
which, unlike the Samuelson Neoclassical synthesis (old) Keynesianism and the New Keynesianism, integrates both an aggregate supply function (that represents production theory and market competitive --perfect or imperfect)--pricing principles) into the macroeconomic analysis. For Keynes, a student of Marshall [1920, p. 348] believed in Marshall’s dictum that “We might as reasonably dispute as to whether it is the upper or the under blade of a pair of scissors that cuts a piece of paper...It is true that when one blade is held still, and the cutting is effected by moving the other, we may say with careless brevity that the cutting is done by the second, but the statement is not strictly accurate, and is to be excused only so long as it claims to be merely a popular and not a strictly scientific account of what happens”

Say’s Law, as Keynes noted [1936, p. 26] required that the aggregate demand function was coincident with the aggregate supply function so that “effective demand, instead of having a unique equilibrium value, is an infinite range of values all equally admissible”. But Keynes [1936, p.26] stated if Say’s Law is not “the true law relating the aggregate supply and demand functions, there is a vitally important chapter of economic theory remains to be written”. Thus, Keynes wrote the general theory to demonstrate what breaks Say’s Law in an entrepreneurial economy.

Minsky, by ignoring production and pricing theory (according to King), does not try to explain what breaks Say’s Law- a task that Keynes [Keynes, 1936, p. 26] claimed was the goal of his general theory. Minsky emphasizes only the effect of financial markets (and particularly wholesale defaults on debts in such markets) as the “cause” of unemployment in an endogenous business cycle he wants to explain. When the financial markets froze up in 2007-2008, the media often spoke of a”Minsky moment” – a credit to Hy for indicating financial markets could collapse, but, in the words of Marshall, a popular and not a strictly scientific account of what happened – and therefore what policies are necessary to get us back to a prosperous economy.
and to prevent “it” from happening again.

As his letter to Weintraub indicated, Minsky believed that a boom and bust cycle was an endogenous feature of the capitalist system. Keynes, on the other hand, believed a boom and bust cycle is not inevitable. Instead the economy could get stuck in a long term unemployment problem. (After all, Great Britain had double digit unemployment every year but one between the first World War and the Second World War.) Or the economy could experience strong growth over decades without a significant boom and bust cycle. Irma Adelman [1991] has characterized the quarter century after World War II as a “Golden Age of Economic Development....an era of unprecedented sustained economic growth in both developed and undeveloped countries”.

Certainly a quarter century of growth due, in my view, to certain Keynesian post war institutions cannot be considered a typical business cycle as Minsky would have us believe. Once a scientific understanding of the cause of unemployment equilibrium are acknowledged, we can create institutions that will prevent significant unemployment from occurring in the world of experience..

INTERNATIONAL ASPECTS OF BALANCE OF PAYMENTS AND GLOBAL FINANCIAL MARKETS

In his financial fragility theory Minsky did not attempt to distinguish between a closed economy and an open economy. Accordingly he did not have anything specifically to suggest when an unemployment problem occurred due to balance of international payments problems that might be the result of persistent trade imbalances rather than financial capital flows per se. Nor is there anything in Minsky to suggest how we can build a firewall to prevent financial contagion spreading unemployment and depression across the global economy.
If one understands the aggregate supply-demand analysis underlying Keynes’s general theory, then one can understand that Keynes has a great deal to state regarding the classical fallacy underlying the law of comparative advantage in industrial nations, and the false belief that flexible exchange rates in a *laissez faire* environment would resolve all international payments problems (but I will have more to say on these international aspects at my after dinner address to the Conference which follows this school.)

**WHAT IS THE FUNDAMENTAL DIFFERENCE BETWEEN MY MONETARY THEORY AND MINSKY’S FINANCIAL FRAGILITY ANALYSIS.**

Following Keynes, I believe that an entrepreneurial system can experience long term—and not cyclical—unemployment problems such as observed in the Great Depression over a decade in the 1930s, the lost decade of Japan in the 1990s, and Great Recession beginning in 2007 that threatens perhaps a decade of worldwide unemployment. We must understand Keynes’s liquidity preference analysis and especially what Keynes labeled in the title to Chapter 17 “The Essential Properties of Interest and Money”.

I would bet that most students and their professors who teach macroeconomics have never heard of these essential properties. Certainly these properties have no role to play in Neoclassical Synthesis Keynesianism, New Keynesianism, Minsky’s financial fragility theory, and especially the monetarist theory of Milton Friedman. Indeed when I raised these “essential properties” arguments in a debate with Friedman in the *Journal of Political Economy* in 1970 [and this debate was later published as a book entitled *Milton Friedman’s Monetary Framework: A Debate With His Critics* edited by R. J. Gordon (1972)]. Friedman’s response was “Davidson refers to ...many correct, interesting and valuable ideas, although some wrong ones....But all...are
strictly peripheral to the main contribution of The General Theory.... none makes any contribution to the formal theory” [p.148-9 of the book].

WHAT BREAKS SAYS LAW?

Understanding what Keynes believed was the “essential” properties, provides the Rosetta stone for understanding what, in Keynes’s analysis, breaks Say’s Law. These essential properties of a money using economy explain why even utility maximizing households would not necessarily automatically spend all income earned on the products of industry. But how is that possible if, after all, earning income involves effort and therefore disutility and only the consumption of producible goods provides utility in orthodox economic theory? Every good university student of mainstream micro-economics knows that all utility maximizing households climb to the highest point on their indifference surface and are constrained only by their total income from climbing higher. Hence mainstream microtheory teaches us that utility maximizing households spend all their income on the products of industry and so supply (income generating production efforts) must create its own demand.

To break Say’s Law one has to explain why households are willing to engage in the disutility activity we call work to earn income today without any specific utility maximizing plan to spend every penny earned to buy specific producible goods today, or tomorrow, or any specific date in the future. For if a household knew it wanted some specific good tomorrow, or a any future date whose purchase could be financed by income earned today (rather than income earned in the future), then the household would place a forward order with the producer , and the producer could hire workers today to fabricate the product “to order” rather than “to market”.

Time, however, is a device that prevents everything from happening at once. The
classical economics of Keynes’s time as well as current mainstream economics based on utility maximizing decisions must presume that reliable information regarding all future outcomes exist today for any given decision made today. I have labeled this presumption about a knowable future the ‘ergodic axiom’ if one uses a stochastic model of the economy. [See my book, The Keynes Solution (2009)]. In an ergodic stochastic system, past market data provides trustworthy calculable probability distributions for reliably forecasting the future. In other words in an ergodic stochastic system, the future is already predetermined by today’s market “fundamentals”. (In a deterministic utility maximizing theory, the ordering axiom plays the same role as the ergodic axiom in stochastic theory.)

Accordingly, households “know” what producibles they can afford to consume over time to maximize their utility for an given earned income today and “known” income to be earned tomorrow\(^1\). By contrast, Keynes argued that ‘unfortunate collisions” in the economy that occurred are due to the economic future being **very uncertain**. “By very uncertain” Keynes wrote [1936, p. 148] “I do not mean the same thing as ‘very improbable’”. As Keynes [1939] noted in his criticism of Tinbergen’s econometric methodology, no reliable information existed today for providing a reliable forecast of future economic outcomes because economic data is not homogeneous over time. In other words, Keynes believed the economic world to be non-ergodic.

For Keynes the inability of households (and firms) to “know” the economic future is essential to understanding why unemployment can occur in an economy that uses money and legal money contracts to organize production and exchange transactions. Money contracts are used to gain some control by firms’ and households’ over their cash inflows and cash outflows as they venture into the uncertain future. Keynes’s liquidity preference analysis is important only
in such a money contracting economy since liquidity implies the ability to meet all money contractual obligations when they fall due. Clearly the possession of money per se provides one with liquidity as long as one’s future contractual obligations do not exceed the stock of money currently held. But money usually does not earn any significant income while it is held – although clearly in our current system, interest payment on checking accountings does provide a small additional income. Moreover, as long as the bank deposit is insured by the government, no capital loss can occur in the future to offset the value of the liquid bank deposit currently held.

The role of liquid financial markets other than money in such a money contracting world is to assure holders of these liquid financial assets that are traded on orderly financial markets that they can readily convert these assets into cash whenever additional funds are needed to meet an existing, or even a potential, contractual cash outflow commitment or to prevent a feared future capital loss in the value of the financial asset. In Keynes’s analysis, the sudden drying up of liquidity in financial markets, occasioned by sudden drops of confidence created by an increase fear of the future, explains why “unfortunate [financial] collisions” can continue to occur – and have occurred more than a hundred times in the last thirty years, according to Joe Stiglitz.

It is the two essential properties (characteristics) of money and all other liquid assets described in chapter 17 of The General Theory that breaks Say’s Law. As Keynes [1936, p. 141 n.1] points out “The attribute of ‘liquidity’ is by no means independent of these two characteristics”.

WHAT ARE THESE ESSENTIAL CHARACTERISTICS?
Money is whatever the State defines as the thing that will legally discharge all contractual
obligations. In a monetary economy, we should recognize that “goods sell for money and money sells for goods, but goods do not sell for goods” (Clower, 1967, pp. 208-9). Consequently, at some future date if a saver decides to use his/her savings to purchase some products of industry, and if the saver has not stored his/her savings in the form of money, then at some future date the saver will have to sell a liquid financial asset traded on a well organized and orderly market for money to finance the purchase of the producible good at that future date. Thus, savers will search for liquid asset time machines that not only incur a minimum of carrying costs but also incur a minimum of transactions costs of buying initially these vehicles and then reselling these time machines when they are later, if ever, sold to obtain money to be used to discharge a contractual obligation.

Since the future is uncertain, orderliness in liquid asset markets require the presence of a market maker who guarantees to the public that he/she will maintain orderliness by selling when there is an overwhelming private sector number of bulls and buying when the private sector is overwhelmingly bearish. When bulls and bears approximately offset each other, the market maker need only match buy and sell orders to maintain orderliness.

In sum, savers will use liquid time machines to transfer the contractual settlement power of their current savings to the indefinite future only via those things that have small or negligible carrying costs and small or negligible transactions costs of buying and readily reselling in an orderly market. Liquid assets can be defined as durables that have minimal carrying costs and that can be readily resold in orderly markets for money (liquidated) while incurring small or negligible transactions costs for purchase and resale. This attribute of liquidity, Keynes declares, will be characteristic only of durables that have two essential elasticity properties
These “essential properties” clearly differentiates Keynes’s general theory from classical theory. Keynes (1936, pp. 230-33) specified these essential properties as:

[1] the elasticity of production associated with all liquid assets including money is zero or negligible⁴, and

[2] the elasticity of substitution between all liquid assets (including money) and reproducible goods is zero or negligible⁵.

The zero elasticity of production means that when some portion of income is “saved”, these savings will be used to purchase things that are not producible by the use of labor in the private sector. In the vernacular, this property is known as “Money does not grow on trees”. Consequently, if households decide to buy fewer space vehicles (automobiles) and save the income to buy liquid time machines, then unemployment increases in Detroit but the laid off workers can not be rehired to harvest money bearing trees. Or as Keynes wrote: “money…cannot be readily reproduced ; labour cannot be turned on at will by entrepreneurs to produce money in increasing quantities as its price rises” [Keynes. 1936, p. 230].

Consequently, in an economic environment where income earners “know” that they can not reliable predict the future, then in the first stage spending-saving decision process that classical economists called time preference and Keynes called the propensity to consume people decide on how much of current income is to be spent on consumer goods and how much is saved, i.e., not to be spent today on producible goods. In Keynes’s second stage of the decision process – the liquidity preference decision – savers decide how to allocate their savings among alternative liquid assets that are available to them as time vehicles for storing and moving
savings’s contractual settlement to the future.

Anything that is, by definition, durable, can be carried into the future. Durable real assets such as plant and equipment, consumer durables, etc, however, have very high carrying costs. Moreover, although the transactions costs of purchasing new real durables may, or may not, be very large, the costs of reselling these durables at future dates can be very large, if these durables can be sold at all in second-hand markets. Durable goods and financial assets that can not be readily resold are called illiquid assets. Most real durable products of industry are illiquid assets and therefore are not useful time machines for moving saved purchasing power into the indefinite future. Accordingly, given Keynes’s definition of savings, illiquid assets including producible durables (e.g., investment goods) and financial assets for which there is no orderly, well organized resale market are not vehicles used to move savings to the future.

In an economy with a developed financial system, there are many possible time machines vehicles available to savers where both the transactions and carrying costs of holding are relatively small or negligible. Liquid financial assets such as money, equities traded on organized, orderly security markets, negotiable bonds, shares of mutual funds, etc are among the most obvious time machines. Keynes’s liquidity preference decision stage indicates that each saver will decide how to allocate unspent income (savings) among alternative time machines (liquid stores of value) that can transport generalized contractual settlement power from today to the indefinite future. Figure 5.1 provides a schematic view of Keynes’s spending-savings-liquidity two stage decision process.

In Keynes’s lexicon, in a money using entrepreneurial economy, a decision to save out of current income involves what Hahn (1977, p.39) has labeled “a non-employment
inducing INCOME

[CLASSICAL TIME PREFERENCE, OR
KEYNES’S PROPENSITY TO CONSUME]

PURCHASE OF NEW CONSUMPTION GOODS

NON-CONSUMPTION (SAVINGS)

[LIQUIDITY PREFERENCE]

OTHER LIQUID ASSETS

MONEY

(Equities, bonds, mutual funds, etc)

Figure 5.1
demand”.--- a type of demand that is incompatible with Say’s Law. Contrary to Benjamin Franklin’s adage, a penny saved is a penny not earned.

But why was it necessary for Keynes to identify a second essential property of money and all other liquid assets, namely that the elasticity of substitution between liquid assets and producible goods is zero (or negligible)? When savings out of current income occurs, the demand for liquid assets increases. If liquid assets are nonproducibles, then their supply need not increase in response to an increase in market demand. Accordingly, the price of liquid assets will increase. If the elasticity of substitution between (nonproducible) liquid assets and the durable producibles of industry is large and positive, then the rising price of liquid assets would reallocate the demand for liquidity towards producibles and therefore employment would increase in the industries producing durable substitutes for liquid assets. High transactions costs of purchasing and high carrying costs, however, means that durable producibles can never be a good substitute for liquid assets as liquidity time machine, hence, the zero or negligible elasticity of substitution.

This zero elasticity of substitution between liquid assets that are what savers use as time machines and reproducible durables, assures that savings, will find "resting places" in the demand for nonproducibles. Some forty years after Keynes, Hahn rediscovered Keynes's point that a stable involuntary unemployment equilibrium could exist even in a classical general equilibrium (Walrasian) system with flexible wages and prices whenever there are "resting places for savings in other than reproducible assets"( Hahn, 1977, p. 31).

Hahn rigorously demonstrated what was logically intuitive to Keynes. Hahn [1977, p. 37] showed that the view that with “flexible money wages there would be no unemployment
has no convincing argument to recommend it .... Even in a pure tatonnement in traditional
[classical] models convergence to [a general] equilibrium cannot be generally proved” if savings
are held in the form of nonproducibles.” Hahn [1977, p. 39] argued that “any non-reproducible
asset allows for a choice between employment inducing and non-employment inducing
demand”6.

Just as Keynes noted [1936, p. 16] that “in a non-Euclidean world... straight lines
apparently parallel often meet ...the unfortunate collisions”, in the Keynes-Post Keynesian non-
Euclidean economic world, an increase demand for "savings" even if it raises the relative price of
nonproducibles, will not spill over automatically into a demand for producible goods.
Consequently when households save a portion of their income they have made a choice for “non-
employment inducing demand” that is incompatible with Say’s Law.

Keynes (1936a, p. 241 argued that the “attribute of 'liquidity' is by no means independent
of these two [elasticity] characteristics”. Thus, as long as wealth owners demand any liquid asset
that has "low elasticities of production and substitution and low carrying costs”(Keynes, 1936, p.
238) as a resting place for their savings out of current income, then (involuntary) unemployment
equilibrium is possible even in the long run.

Classical theory, on the other hand, assumes that only producible goods and services
provide utility. Why then would any rational human being engage in unpleasant income earning
activities only to store that portion of their income that they save in the form of nonproducible
liquid assets which classical theorists insist provides no utility to the saver? In the classical long-
run analysis of economic decision makers professed by Greg Mankiw of Harvard, only an
irrational lunatic would behave this way and make a fetish over the liquidity of one’s portfolio.
Yet, in the world of experience, sensible people do store their savings in the nonproducibles such as currency, bank deposits, and a plethora of other liquid financial assets traded on well-organized, orderly financial markets.

In a world where the ergodic axiom is not applicable, people recognize that they do not “know” and can not know the future in a statistically reliable sense. Decision makers’ may fear a future that they “know” that they cannot know. It is, therefore, sensible for decision makers to store some portion of their income in money and other nonproducible liquid assets that can be readily converted into money as long as future contractual liabilities can be expected to be legally discharged by the tendering of money. The more liquid the asset used to store savings today, the more readily it can be used another day to command resources sometime in the indefinite future.

If, as Keats wrote, “A thing of beauty is a joy forever”, then one can never have too many beautiful things. Similarly if liquidity is a security blanket against an uncertain economic future, then one can never have too much liquidity. The more decision makers fear the uncertain future, the more utility they obtain from possessing security blankets. The existence of savings in the form of money and other liquid assets breaks the Say’s Law proposition that supply must create its own demand.

WHY ARE DEFICITS GOOD?

I hope by now I have convinced you that uncertainty is not the empty bag that Hy Minsky claimed and that savings is made primarily to protect one from uncertain events that might threaten one’s life style. Once we recognize every decision to save is a nonemployment inducing decision, then if some member of the population have a positive propensity to save, then others
must spend more than they earn to maintain or expand employment. These spenders in excess of
current income must deficit finance their dissavings. In other words, deficits used to purchase
goods is an employment enhancing decision.

In Keynes’s time, consumers did not have access to credit cards. Accordingly their ability
to run up significant debts was quite limited. Accordingly in the private sector Keynes believed
that the most likely debtors are entrepreneurs who will finance new and additional investments
that exceed current retain profits via selling debt or equity. If, coincidentally, the issuance of new
IPOs of debt and equity contracts that are traded on orderly markets just equal the savings
tendencies at full employment, then there is no reason for government to incur deficits to
maintain a fully employed economy. But this means that in any society where there is positive
propensity to save by some private sector decision makers, there must be sufficient increases in
spending in excess of income by others—preferably in the private sector— to try to maintain a
fully employed economic system. When the private sector can not, or will not, borrow enough to
spend sufficiently to offset the private sector’s propensity to save at full employment, then, in a
closed economy only the government whose constitution give it the ability to control and issue
money and enforce legal contracts can and must deficit spend in order to insure a prosperous
economy that makes full use of the resources available to it. Accordingly, I readily accept
Minsky’s tag that “Davidson never saw a deficit he did not love”.

SECURITIZATION AND LIQUIDITY

The financial innovation of securitization which produced mortgage backed securities, CDOs,
SIVs, etc. was suppose to spread risk to those who could afford to hold risky assets. Many who
buy corporate equities do not know the major profitable business lines of the corporations they
are buying into. Similar most buyers of the securitized derivative assets did not know the underlying mortgages, etc. They believed they were buying very safe, triple AAA securities as rated by the rating agencies. Moreover the investment bankers who created these securitized derivatives and organized a market where they could be bought and sold, told the buyers that these derivatives were “as good as cash” but they paid a higher rate of return.

Let us take mortgage backed securities and especially the sub-prime mortgage crisis to explain what is the flaw in such thinking. Before securitization, normally mortgage lenders were banks who made loans to creditable borrowers who past the three C test of bank lending: Collateral, Credit History, and Character. (Remember Jimmie Stewart in It’s a Wonderful Life.) Each home mortgage debt, however, is never homogenous with any other mortgage debt. No two real estate properties can occupy the same space – so even similar mortgages on tract housing developments will involve houses on different lots, etc. Moreover, each borrower has different economic characteristics of income, wealth, and other socioeconomic factors which distinguishes each borrower from ever other home buyer. Accordingly, before securitization, when a banker made a mortgage loan, the banker knew he/she had to carry the mortgage bond on the bank’s balance sheet until the loan was either paid off or the borrower defaulted. Thus the banker carefully investigated the three C’s of any potential borrower and then added a down payment cushion sufficient to protect the bank in case the needed to foreclose occurred in the future because of some unfortunate event. The resulting mortgage was basically illiquid.

When securitization encouraged the development of mortgage backed securities these illiquid assets were supposedly converted into liquid assets. With the revoking of Glass Steagall act all restraints were off. Anyone originating a mortgage loan could sell it and make money on
an origination fee and perhaps even on a servicing fee. In case of default, the originator no longer carried the loan on its books and therefore did not have to worry about a balance sheet loss. Accordingly, there was a great incentive to coax (lure) people into borrowing to finance purchase of a home. When the supply of all credible borrowers in a market were almost exhausted, mortgage originators searched high and low to find anyone who would sign a mortgage debt obligation. Bill Black of the University of Missouri has documented that many of these “sub prime” loans were liar loans and/or conceived in other fraudulent practices. As long as the black queen of a sub-prime mortgage could be passed off to someone else there was money to be made.

Investment bankers who created these derivative financial assets typically organized a market where tranches to the CDOs, SIVS, etc could be bought and sold. But the market organizer was usually not a market maker,— where the latter is an institution that assures market participants that prices will change in an orderly manner. Accordingly when sub prime borrowers began to default in significant numbers, no holders of these securitized derivatives could know what the quality of the underlying mortgages in his/her tranche was and what was the resulting market value of the security. Fear prevailed and these derivatives became illiquid as there were was no market maker to assure orderliness.

INFLATION AND DEFLATION
The deficit spending by government usually means that a significant portion of the government debt will be sold directly or indirectly to the Central Bank. The result will be a significant increase in the money supply. Will that not mean inflation is right around the corner? Those who believe so, are accepting the classical theory axiom of neutral money as a basic building block of
their analytical model. Keynes, however, argued that money was never neutral—neither in the short run nor the long run.

Given the time constraints on this lecture I can not go into detail regarding an anti-inflationary policy—although I should call your attention that currently the Consumer Price Index has declined in both April and May of 2010 and the Fed is becoming more worried about deflating prices rather than inflation, even as the money supply grew tremendously in 2008 and 2009..

**Explaining inflation**

Inflation occurs when the money prices of most goods and services are rising. Keynes [1930, vol. 2, pp. 155-6] identified two types of inflation: Commodity Inflation and an Incomes Inflation.

Commodity inflation is identified with rising market prices of durable standardized commodities such as agricultural products, crude oil, minerals, etc. Typically these commodities are traded in public markets similar to those of liquid asset security markets. These commodity markets tend to have prices associated with a specific date of delivery of a specific quantity of the commodity—either delivery today (“spot”) or delivery (forward) at a specific date in the future.

Commodity markets for a future date delivery are limited to only a few months in the future. Since most commodities tend to take a significant length of time to produce, the supply of commodities for any future date in these markets are
typically already fixed by existing stocks plus any semi-finished product that are currently in the pipeline and are expected to be finished by the date of delivery. If there is a sudden increase in market demand (or even an expected increase) for delivery for any date in the near future in these markets, there is the expectation that there can be little or no augmentation to the existing supply available on that market date. Consequently any increase market demand will only inflate the price of these commodities in the futures market. We are all familiar of stories about commodity speculators who buy up significant inventories of the commodity and then withhold these inventories from the market in order to inflate the commodity market price. If these speculators are successful, they can then sell their inventory at a profit. Such successful speculators are said to have “cornered the market”.

Since a commodity price inflation occurs whenever there is a sudden and unforeseen change in demand or available supply for delivery, this type of inflation can easily be avoided if there is some institution that is not motivated by self-interest but instead wants to protect society from such inflationary (or deflationary) pressures. To prevent commodity price inflation requires the government to maintain an inventory of the commodity as a "buffer stock" to prevent changes in market demand and/or supply from inducing significant commodity price movements. A buffer stock is nothing more than some
commodity shelf-inventory that can be moved into and out of the market to buffer the market from disorderly price disruptions by offsetting the previously unforeseen changes in demand or supply as they occur.

For example, since the oil price shocks of the 1970's, the United States has developed a "strategic petroleum reserve" where crude oil is stored in underground salt domes on the coast of the Gulf of Mexico. These oil reserves are designed to provide emergency market supplies to buffer the market price of domestic oil if there is a sudden decrease in oil supplies from the politically unstable Middle East. The strategic use of such a petroleum reserve means that the price of oil will not increase as much as it otherwise would if, for example, a political crisis broke out in the Middle East.

An oil price inflation could be avoided as long as the buffer stock remained available to offset any immediately available commodity shortage. Thus, during the short (week long) Desert Storm war against Iraq in 1991, U.S. government officials made strategic petroleum reserves available to the market to offset the possibility of disruptions (actual or expected) from affecting the market price of crude oil. The Department of Energy estimated that this use of a buffer stock prevented the price of gasoline at the pump from rising about 30 cents per gallon during the brief Desert Storm period.
Use of buffer stocks as a public policy solution to commodity price inflation is as old as the biblical story of Joseph and the Pharaoh's dream of seven fat cows followed by seven lean cows. Joseph -- the economic forecaster of his day -- interpreted the Pharaoh's dream as portending seven good harvests where production (supply) would be much above normal causing prices (and farmers’s incomes) to be below normal. This would be followed by seven lean harvests where annual production would not provide enough food to go around while prices farmers received would be exorbitantly high. Joseph's civilized policy proposal was for the government to store up a buffer stock of grain during the good years and release the grain to market, without profit, during the bad years. This would maintain a stable price over the fourteen harvests and avoiding inflation in the bad years while protecting farmer's incomes in the good harvest years. The Bible records that this civilized buffer stock policy was a resounding economic success.

**Incomes Inflation.** Keynes also identified a second form of inflation called Incomes Inflation. This type of inflation is associated with the rise in the money costs of production associated with each unit of goods produced. These money costs of production represent the income payments to wage and salary earners, material suppliers, lenders, and profit recipients. Thus, for example, if the money wage rate increases while the productivity of workers are unchanged, the unit labor
costs of each unit of output rises. Income inflation occurs when the money costs of production increase because owners of the inputs to the production process receive higher money incomes that are not offset by productivity increases. Higher production costs means business firms must charge higher prices if they are to make a profit.

This incomes inflation terminology highlights the obvious but oft neglected fact that, given productivity relations, inflationary increases in the prices of domestic producible goods are always associated with (and the result of) an increase in someone's money income earned in the production process. Accordingly if one is to constrain the rate of inflation of domestically producible goods, one must constrain the rise in the money income of inputs in the production process to improvements in productivity. Rises in money wages, salaries and other material costs in production contracts always imply the increase in someone's money income. The costs of production of a firm are the other side of the coin of the income earned of people who provide labor or property for use by the firm in the production process.

With slavery illegal in civilized societies, the money-wage contract for hiring labor is the most universal of all production costs. Labor costs accounts for the vast majority of production contract costs in the economy, even for such high-
technology products as NASA spacecraft. That is why, especially in the twenty five years following World War II when unions in the United States had considerable strength and insisted on cost of living clauses in union contracts, inflation was typically associated with money-wage inflation.

If money wages rise relative to the productivity of labor, then the labor costs of producing output increase. Consequently firms must raise their sales contract price if they are to maintain profitability and viability. When production costs and therefore contract prices for orders are rising throughout the economy, we are suffering an incomes inflation. Clearly then to prevent incomes inflation there must be some constraint on the rate of increase of money incomes relative to productivity.

For many years following the second World War rising money wage rates in most developed nations were a major factor in producing Incomes Inflation. To understand why this wage-price inflation was particularly rampant for many years after the second world war, we must recognize the change in the nature of the industrial society that followed World War II. As John Kenneth Galbraith noted; “The market with its maturing of industrial society and its associated political institutions...loses radically its authority as a regulatory force....[and] partly it is an expression of our democratic ethos” [Galbraith, 1978, pp. 8-9].
After the devastating experience most households endured during the Great Depression of the 1930s, the emerging ethos of the common man in democratic nations held that people should have more control of their economic destiny. The Great Depression had taught that individuals can not have control of their economic lives if they leave the determination of their income completely to the tyranny of the free market. Consequently after World War II in societies with any democratic tendencies people not only demanded economic security from their economic system but they also demanded to play a controlling role in determining their economic life. This required power to control one’s income. The result was an institutional power struggle for higher incomes between unions, political coalitions, economic cartels and monopolistic industries. When these power struggles lead to demands for higher incomes at any level of production, the result is an Incomes Inflation.

As long as the government guarantees that it will pursue a full employment policy, then all self-interested workers, unions, and business managers have little fear that demand for higher prices and money income will result in lost sales and unemployment. As long as the government accepts the responsibility for creating sufficient aggregate effective demand to maintain the economy close to a full employment level of output, there will be no market incentive to stop this recurring
struggle over the distribution of income that results in incomes inflation.

Full employment policies without some deliberate announced incomes constraint policy assures that there would no longer exist what Marx derogatorily called "the industrial reserve army” of the unemployed who would be willing to get a job by accepting a lower wage than the employed. As long as this reserve army of unemployed exists, it would hold down employed workers’s demand for higher wages. In a laissez-faire market environment, a reserve army of the unemployed can be a major force to constrain organized workers’s demand for higher money wages.

Since the 1990s, with globalized free trade, the almost unlimited supply of unskilled and semi-skilled workers in countries such as China, India, Vietnam, etc. willing to work at much lower wages than those that prevail in the West have acted similarly to a Marxist “industrialized army of the unemployed” in limiting western workers ability to increase, or even maintain the existing money wage rate paid to most blue collar and even some white collar jobs. The resulting outsourcing of high paid American worker jobs to these low wage countries have not only reduced domestic union power to raise wages and fringe benefits of workers, but it has resulted in destruction of a hollowing out of the manufacturing base in the United States. (I discuss the problems and policies for dealing with outsourcing
and international trade in chapter 7 and 8 of my book The Keynes Solution [Davidson, 2009]).

In the absence of an industrial reserve army of cheap foreign workers, there is only one way to combat any incomes inflation, according to classical economists who believe in the beneficence of the “invisible hand” of free markets. In a free society where people are motivated solely by self-interest, workers and entrepreneurs are, of course, free to demand any price for their services, even if such demands are inflationary. As the former Prime Minister of England, Mrs. Thatcher, was often quoted as saying "One of the rights of a free society is the right to price oneself out of the market". Of course if governments guaranteed to always promote a full employment economy, then one can never price oneself out of the market. To assure that inflationary income demands of workers and, entrepreneurs will always price themselves out of the market requires that the nation’s central bank ensures that the banking system will not finance these inflationary income demands while the government maintains a tight fiscal policy. A tight monetary and fiscal policy that reduces market demands so that the fear of loss of profits strengthen managers backbone sufficiently to deny workers wage demands and the fear of unemployment quells the worker’s demands for improvements in wages and fringe benefits is the anti-incomes inflation policy of orthodox classical theory.
If an independent central bank adamantly refuses to increase the money supply sufficiently to finance inflationary income demands of owners of domestic factors of production, then the resultant slack demand in the market place for domestic goods will discipline all workers and firms with the fear of loss of sales and income. The hope is that this fear will keep wage and price increases in check. To make this fear credible, a central bank doing inflationary targeting, must institute a very restrictive monetary policy so that all firms and workers feel threatened. Nothing closely approaching full employment prosperity can be tolerated as long as we rely on the free market’s incomes policy of threatening unemployment and enterprise failure. Thus those who advocate “inflation targeting” monetary policy by the central bank are implicitly indorsing an incomes policy based on “fear” of loss of jobs, sales revenues, and profits for firms that produce goods and services domestically. Fear, it is believed, will keep owners of the domestic factors of production in their place. The amount of slack demand necessary to enforce this incomes policy of fear will depend on what is some modern classical economists call the domestic “natural rate” of unemployment.

Accordingly, proponents of this inflation targeting incomes policy of fear are implicitly suggesting that the natural unemployment rate will be smaller if government “liberalize” labor markets by reducing, if not completely eliminating
long-term unemployment benefits or other money income supports including minimum wages, employer contributions to pension funds, health insurance for their employees, legislation protecting working conditions, and even putting obstacles in the way of unions organizing workers. Then workers will be less truculent.

A permanent social safety net to protect the unemployment often is seen as mollycoddling casualties in the war against inflation so that others may think there is little to fear if they join the ranks of the unemployed. A ubiquitous and overwhelming fear instilled in all members of society is a necessary condition for the barbarous inflation targeting program to work. The result is inevitably that the civil society is the first casualty.

With the integration of populous nations such as China, India, etc into the global economy of the 21 century, as we have already suggested, another “industrial reserve army” has been introduced into the economies of many OECD nations. The promotion of “free trade” has instilled fear into high wage domestic workers who might loss their jobs to foreign low wage workers. The labor forces of major industrial nations have been significantly humbled and constrained in their income demands in the last two decades. As a result incomes inflation has been limited to those domestic service occupation and industries and
manufacturing industries (e.g., national defense) where outsourcing is not a possible alternative. The result has been a growing inequality of income between the unskilled and semi-skilled workers in Western Industrial nations and the Western managers and owners of multinational corporations who can engage in outsourcing of their lower end jobs while demanding higher self payments. Recently, however, the growing labor unrest and strikes in China suggests that this source of anti-wage inflation policy may becoming to an end unless one can outsource to countries like south Africa here blacks have unemployment rates of over 40 per cent.

If one find’s the classical theory’s anti incomes inflation policy a not very civilized action against one’s fellow citizens, then the question is there an alternative anti-inflation incomes policy that one can develop from Keynes’s analytic approach?

In 1970, before outsourcing became a major weapon to keep labor in its place, Professor Sidney Weintraub of the University of Pennsylvania (Weintraub, 1958, 1970) developed a "clever" anti-inflation policy which he called TIP or a tax-based incomes policy. TIP required the use of the corporate income tax structure to penalize the largest domestic firms in the economy if they agreed to wage rate increases in excess of some national productivity improvement standard.
Thus the tax system would be used to penalize those firms that agreed to inflationary wage demands. The hope of TIP was that if wages increases could be limited to overall productivity increases, then workers and owners of all other inputs to the domestic production process would willingly accept non-inflationary monetary income increases.

There were two conditions that Weintraub believed were necessary if TIP was to be an effective policy that did not rely on “fear” of loss of income to constrain Incomes Inflation. These conditions are:

(a) TIP was to be a permanent policy institution, and

(b) TIP must be a penalty system, not a reward (subsidy) tax system.

Once instituted, TIP could never be removed for otherwise it would become an impotent policy as it reached its termination date. (Weintraub indicated that the magnitude of the tax penalties could be altered as conditions warranted, but there must always be the existence of a threat of penalties to insure compliance.)

Secondly, a reward tip, i.e., one which reduced people's taxes if they adhered to the national wage standard would be administratively unworkable, as everyone would claimed the reward and it would be up to the government to prove which claimants were not entitled to the reduction in taxes. Weintraub suggested that TIP was similar to the way government enforces speed limits on the nation's highways. If
one exceeds the speed limit—which is always in place— one paid a speeding fine. Governments never paid good drivers for not exceeding the speed limit.

Unfortunately, the United States and many other nations have never seriously attempted to develop a permanent penalty-oriented TIP. Instead inflation has been fought via the typical classical theory "incomes policy of fear" i.e., restricting the growth of the money supply so as to create slack markets that threatens profits of business firms and unemployment of workers. Those who raise their wages above productivity growth will then find themselves priced out of the marketplace.

Weintraub, the perpetual believer in the use of human intelligence rather than brute (market) forces to encourage socially compatible civilized behavior, believed that ultimately some form of civilized incomes constraint policy would be seen as a more humane policy to control inflation without the necessary depressing side effects of traditional classical inflation targeting policy.

Words and concepts are important weapons in the fight against inflation. One of the most important functions of government in an anti-inflationary struggle is to educate the public of the major industrialized nations that the income distribution struggle is (in the aggregate) a no-win, actual lose game, although there may be relative winners for periods of time. In the absence of a sensible civilized policy regarding the distribution of income nationally and internationally, the result is not
a zero-sum game, but a real loss in aggregate income nationally and internationally as governments pursue restrictive monetary and/or fiscal policies, or permit large business organizations to outsource the production of their products.

In today’s global economy, where outsourcing has become a significant force in reducing inflationary pressures in industries that can engage in trade as well as a major threat to the standard of living of workers in the western industrial nations contributing to a widening of the inequality of the distribution of income, the call for an income policy is rarely heard.

I and most Post Keynesians believe in an incomes policy, while, as King noted: “Minsky had no particular objection to aggregate supply and demand analysis or a tax based incomes policy, but did not regard them as especially interesting or important.”

CONCLUSION

I believe one of the reasons that post Keynesians have failed to have a significant impact on mainstream economics is that they appear to be divided as to what is Post Keynesian theory is. This lecture has, I hope, shown that there remains significant differences between Minsky and myself. I will end by quoting some wise words of Benjamin Franklin: “If we don’t all hang together, we will all hang separately”.

REFERENCES


Gordon, R. J. Editor (1972), *Milton Friedman’s Monetary Framework: A Debate With His Critics* (University of Chicago Press, Chicago)


NOTES.

1. Some modern Keynesians implicitly accept the ergodic axiom but then add that some decision makers are exposed to asymmetric information, i.e., that some (or all) decision makers perceive different aspects of the existing correct information about the future. Although Stiglitz calls this asymmetric information, one can conceive of this as a situation where different decision makers view the world through different blindfolds –each blind fold filtering out some essential information regarding the future that is already predetermined. The problem with this theory is why doesn’t a Darwinian process winnow out those that make wrong decisions, and reward those who make decisions “as if” (in Friedman’s terminology) they fully saw the reliable information about the future that already exists.

2. (How many British Petroleum stock holders including many very sophisticated investors on April 20,, now wish they could see have seen the value of of British Petroleum stock on June 16, 2010? One of the world’s largest money management firm, Blackwater, held more than 1.1billion shares worth $14.57 billion on April 20. By June 16 these shares were worth $7.5 billion.)

3. Keynes developed this theory of liquidity late in his evolving general theory analysis when he recognized that to explain the existence of involuntary unemployment required specifying ““The [Two] Essential Properties of Interest and Money” [Keynes, 1936, ch. 17].

4. The negligible production elasticity applies to those economies that adopt a commodity form of money. The commodity chosen will be one where even if the demand for the commodity increases, additional production of the commodity will be difficulty if not impossible. For example, Keynes (1930, 6, p. 259) for example that the commodity “Gold is, and always has
been, an extraordinary scarce commodity. A modern liner could convey across the Atlantic in a single voyage all the gold which has been dredged or mined in seven thousand years”.

5. A zero elasticity of substitution implies that the gross substitution axiom is not universally applicable to all demand functions (i.e., specifically the demand function for liquidity), and therefore, as Arrow and Hahn (1971, p. 361) have demonstrated, in the absence of ubiquitous gross substitution all existence proofs of general equilibrium are jeopardized.

6. Thus, as Hahn noted [197, p. 31], “But land, as Keynes to his credit understood, would have the same consequences [as resting places for savings] and so would Old Masters”

7. At least before British Petroleum decided to store crude oil in the Gulf of Mexico –).