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Documents

The Major Debates in Macroeconomic Thought - a Historical Outline

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Introduction[♣]

There have been little controversies among economists regarding allocation of resources in the analytical framework of an economy in equilibrium or steady state. However, when it comes to the correct policy at the present situation there have always been disagreements. Interestingly, methodological debates have been even fiercer. A particularly interesting question that emerges in light of these observations is; what are the relationships between great economists' methodological angel of incidence and their policy prescriptions when it comes to dealing with business cycles? In this essay I try to give a historical outline of the differences in both theory and methodology between the most influential schools of macroeconomic thought. As we shall see, there are confusions when it comes to who agrees with whom on which issues.

A natural start of a historical outline of economics as a science would be with the classical economists of the Enlightenment from around 1750. It was this school that virtually introduced economics as a social science. However, because of the danger of loosing the generality I will begin the essay with a brief introduction to Mercantilism that arose in the 1550's. In 1871 the Austrian economist Carl Menger marked a clear turn in the way of looking at economics. While classical economists had been occupied with how to maximise economic growth, Menger and other advocates of the Austrian school were more concerned with marginal utility, putting the individual in the centre. Austrian economists saw macroeconomics only as a derivative of microeconomics. The main policy recommendation of both classical and Austrian economists was that the state should not interfere with economic processes. John Maynard Keynes challenged this view with his *General Theory of Employment, Interest and Money* in 1936 in which he promoted state demand control. Even though he called it a general theory his views are best understood when looking at them in the light of the long lasting economic downturn during the great depression in the1930s. Keynes' constructive policy recommendations in a difficult period may explain why he won a great number of adherents in only a short time. Blaug refers to this process as "the Keynesian Revolution":

> "the Keynesian Revolution comes close to conforming to a 'scientific revolution' as defined by Thomas Kuhn, involving a sense of theoretical 'crises', the emergence of a radical new 'paradigm', and a pronounced generation gap in the response of scientists to the clash of the old and new paradigms." Blaug (1990, p. 25).

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The Keynesian views were not seriously challenged until the 1960s when Milton Friedman argued persuasively that demand control is futile. He believed that shocks in the money supply have large effects and explains virtually all fluctuations in economic activity. However, he did not trust the monetary authorities to apply the correct policy in order to stabilise output, so he believed that the best monetary policy would be a neutral and transparent one. Although Friedman shared his policy prescriptions with Robert E. Lucas and the new classical economics that arose in the 1970's, there was a great dispute between them methodologically. While the new classical economists value virtues like microfoundations, generality and idealistic approaches, Friedman spoke of aggregation, simplicity and that a theory should be judged by its predictive power. The classical economists' main message was that all markets clear instantaneously, the economy is in equilibrium at all times. Furthermore, they believe that there is no such thing as involuntary unemployment. Their views became mainstream economics after the period of stagflation (the coexistence of unemployment and inflation) in the 1970's, but were challenged by new Keynesian macroeconomists in the 1980's. New Keynesian economics is distinguished by plurality in methods of analysis. However, they are unanimously stating that there are both nominal and real rigidities in the economy causing long lasting cyclical movements. New Keynesian macroeconomics is the last school of thought that I review in this essay. Nevertheless, I will try to look ahead by looking back when I in the last section ask myself; what have we learned from the disputes of the past?

Mercantilist and Classical economics

Economically the period 1550-1750 was dominated by a system of ideas and government policies which basically sought to strengthen government finances and its need to finance wars by tariffs, exchange controls and monopoly trading companies. In general it was believed that accumulating bullion through a systematically strong balance of payments best ensured a nation's prosperity. Since many of the writers of this school were merchants the system is referred to as mercantilism. Thomas Mun, for example, was the director of the East India Company and a leading mercantilist. To ensure that a nation produced at its full output potential mercantilists engaged themselves in fighting unemployment. Their means to achieve full employment was similar to those of Keynesians in the twentieth century, namely public works and regional policies[1].

David Hume's (1711-76) critique on mercantilism in his *Political Discourses* (1752) and Adam Smith's (1723-90) *The Wealth of Nations* (1776) are credited as being the virtual founders of classical economics which was the dominant school of thoughts until about 1870. They both advocated free

[1] For more on mercantilism see Heckscher (1935).

trade and a limited role for the state as essential for improved economic growth. Hume's central assertion was that real factors such as production, rather than a favourable balance of payments, determine a nation's prosperity; and that such prosperity, rather than a bullion hoard, was the only sure foundation for the security of the state. Trade, he argued, is of mutual advantage, and the profits from trade are best administered by the economic agents. Smith like Hume recognises in *Theory of Moral Sentiments* (1759) that humans may be stirred to increased economic effort by the attraction of consumers goods beyond the bare necessities[2]. This produces an underlying mechanism of a market economy that causes self-interested economic agents through exchange to promote the general good of society. Smith labelled this mechanism *the invisible hand*. Classical economists were under heavy influence of the Philosophers of the Enlightenment like Voltaire, Rousseau, Locke, Smith, Hume and Kant who saw scientific knowledge and self-awareness as the best guidance in all parts of life. Their materialistic and atheistic comprehension of the world threatened both superstition and other institutionalised limitations on individual freedom, such as organised religion and limitations on the freedom of speech and the freedom of trade. In 1784 Immanuel Kant (1724-1804) defined the Enlightenment as man's emergence from his self-imposed tutelage, and offered as its motto *Sapere aude*, or "Dare to know": take the risk of discovery, exercise the right of unfettered criticism, accept the loneliness of autonomy[3].

The central message from the classical economists is known as the classical dichotomy; real variables are determined by other real variables alone and monetary variables by only other monetary variables. This implies that monetary policy can only change the general price level, but not real wages, production and employment. Consequently, the classical economists' main concern was how to maximise economic growth, and not how to stabilise the economy. Their work may in general be characterised as equilibrium analysis. However, both Hume and Smith recognised that the economy often was in disequilibrium, but they regarded the fluctuations, essentially, as random shocks stemming from wars and harvest fluctuations. Furthermore, although nominal wage rigidities, causing wages to prevail at a high level after a fall in demand, was accepted as an explanation for periodically high unemployment rates, the labour market was believed to operate most efficiently on its own. It was exactly this dualism that John Maynard Keynes sought to demolish in his *General Theory* (1936) which I will turn to below.

[2] Adam Smith, Essays (London: Alex Murray, 1869), pp. 48-49.

[3] Kant (1784, p. 14).

Austrian economics

The Austrian economist Carl Menger (1840-1921) is usually regarded as the founder of this prominent school of thought that arose with Menger's discovery of marginal utility in his principal work published in 1871, *Grundsätze der Volkswirtschaftslehre (Principles of Economics)*. However, it is more accurate to say that the principle of marginal utility was discovered more or less simultanously and independently by Menger in Vienna, William Stanley Jevons in London with *Theory of Political Economy* in 1871 and Léon Walras in Lausanne with *Éléments d'économie politique: ou, théorie de la rechesse sociale (Elements of Pure Economics: or the Theory of Social Wealth)* published in two parts in 1874 and 1877 respectively. Austrian economics, also called the Marginal Utility School, marked the beginning of modern (micro)economics, in that it shifted the attention of economists from cost to marginal utility in the explanation of value. The second generation of Austrians, like Ludwig von Mises, Friedrich A. von Hayek and Ludwig A. Lachmann, was more concerned with the theory of money, business cycles and the methodological foundations of economics.

Central in the methodology of Austrian economics is *methodological individualism.* Methodological individualism implies that no explanation of economic phenomena is satisfactory unless it is defined from an analysis of individual choices. It involves accepting the complexity and plurality that exist because people have different experiences, sees things differently and have different cultural backgrounds, etc., and because they interact. Because of their subjectivism, the Austrians believe that social sciences have no choice but to try to *understand (Verstehen*[4]*)* the actions of individuals by imaginatively trying to see the world as they see it themselves. Menger, for example, sought to explain economic phenomena by only studying basic individual elements such as needs and satisfaction expressed as invariable sequences not influenced by time and space. As a consequence macroeconomics is illegitimate in Austrian eyes because it implies studying relationships between aggregates and not the real causes of such relationships, namely the sum of individual action. In order to say anything about economic phenomena Austrians believe that you have to take everything into consideration by using so called *open systems*, i.e. completely specified systems with interdependence between economic agents. Walras is particularly known as an advocate for this view. However, in order to proceed with economic analysis, when the system is as complex as the world, Austrians use *ideal types*[5] and generally reject to analyse the system mathematically.

[4] Austrian economists used the term "understanding" as a translation to Max Weber's *Verstehen.* It is purely a technical term describing the imaginative process.

[5] *Ideal types* is a term introduced by Max Weber as hypothetical mental constructs that exaggerate fundamental principles.

Although Austrian economists believe that scientific research can help us to understand particular phenomena it cannot be used to exactly mimic the real world, or said in another way, economics are non-predictive. Austrians do not recommend that authorities interfere with the economic processes for the similar reason, namely that we are unable to predict the effect of a policy action. In order to predict you have to have a closed form and an economic law. They do not reject economic laws, but since economic laws necessarily must be derived from basic individual elements they cannot be used in predictive purposes. The Austrian notion of rationality implies that individuals make conscious decisions that consist of maximising utility by acting in a way that adapts means to ends. When predicting you turn it all around, they argue, you specify the means to predict the ends, then individuals would be "reacting not acting":

> "If a man knew the future, he would not have to choose and would not act. He would be like an automaton, racting to stimuli without any will of his own." Mises ([1949] 1966, p.105)

Hayek (1952, p.41) says it like this:

> "We 'understand' the way in which the result we observe can be produced, although we may never be in a position to watch the whole process or to predict its precise course and result."

The Austrian economists believe that the fundamental causes of human action is not observable, consequently the economic principles have to be true *a priori* and they cannot be contradicted by empirical evidence. For that reason they are very careful so that their assumptions are in fact true. Austrians would not accept assumptions about particular preferences or abilities for example. An example of an assumption that would be rejected is that individuals are only concerned with real prices not nominal. On the other hand, assumptions like that people are acting in order to reach an end such as satisfaction and that preferences are transitive are valid assumptions. Mises ([1949] 1966, p. 103), for example, rejects all empirical work suggesting that preferences are intransitive. An experiment in which a person is presented with a choice between A and B and choose A, then with a choice between B and C and choose B, and finally with a choice between A and C and choose C does not prove that his/hers preferences are intransitive, only that his/hers preferences have changed. Furthermore, Austrians are generally sceptical to applying too much meaning into empirical work because individual background and culture affect the researcher's interpretation of his/hers observations. However, it is not true to say that Austrians do not recognise the benefits from perceptions. Statistics and observations cannot be used as means to obtain scientific knowledge, but are still useful to scientists, they argue. Austrian economists believe that scientists may use the information in order to compare properties of particular events or individuals to their own scientific analysis. Austrians also

regard empirical analysis as important in documenting historical occurrences. Hayek (1952, p. 62-3) says, for example, that:

> "... in the statistical study of social phenomena the structures with which the theoretical social sciences are concerned actually disappear. Statistics may supply us with very interesting and important information about what is the raw material from which we have to reproduce these structures, but it can tell us nothing about these structures themselves. ... That they [statistics] cannot produce generalizations does, of course, not mean that they may not be useful, even very useful; they will often provide us with the data to which our theoretical generalizations must be applied to be of any practical use. They are an instance of the historical information about a particular situation".

The methodology of Austrian economics may be described as idealistic and inspired by Kantian principles. In fact, Menger is often regarded as the advocate of the so-called neo-Kantian approach. The Enlightenment philosopher Immanuel Kant sought to build a compromise between positivism and rationalism, taking the best from both, or conversely, abandoning what he thought were their weaknesses. He disputed for example the rationalists' claim that reasoning is the only way to achieve true scientific knowledge. Kant recognised the importance of observation in this process. However, he objected to Positivists who thought of themselves as distinguishing facts from values just because they based their science purely on observations. There is nothing objective in the way a scientist interprets observations, he said, an observation is unique and interpreted differently across individuals. Instead, he said, in the process of generating scientific knowledge we use the human mind and fit our own presumptions to what is observed. Kant saw the world as being so complex that each individual must base his or hers interpretation of sensations on their own prior assumptions. In order to demonstrate his opposition to positivism Kant described this process as using *synthetic a priori* assumptions. According to positivists *synthetic a priori* assumptions do not exist, there are only two sources of knowledge, logical reasoning or *analytic apriori*, and empirical observations or *synthetic a posteriori.* It is easy to see the similarities between Kant's legacy to those of the new Austrian school. The use of methodological individualism and open systems in order to capture complexities, the recognition of empiricism as a learning device, the distinction between objective truth and subjective interpretation of experience, the use of true *a priori* assumptions, and trying to understand not predict are all Kantian or Kant-related features of Austrian economics.

John Maynard Keynes (1883-1946)

As a student at King's College Keynes formed friendships with other young Bohemians who a few years later formed a group or a forum for social and intellectual debate. The group was by the media named The Bloomsbury Group after an area in Central London. Among its members were the writers Virginia Woolf and her husband Leonard Woolf, her sister Vanessa Bell who was a painter, and her sister's husbond, the critic of art and literature, Clive Bell, the biographer Lytton Strachey, the modernist painter Duncan Grant, one of the most important British novelists of the twentieth century, Edward Morgan Forster, the modernist art critic and painter Roger Fry, the writer Vita Sackville-West and her husbond the biographer Sir Harold Nicolson, and Keynes himself. All the members of the group were highly critical to the prevailing Victorian views and sceptical of conventional values.

The whole group was under influence of the Cambridge philosopher George Edward Moore. It is likely that it was Moore's ideas of moral philosophy that was most appealing to many of the members of the group. Moore was in Principia Ethica (1903) and Ethics (1912) concerned with replacing the concept of goodness as something naturalistic, like something physical or psychological quality such as pleasure or self-realisation, with a simple, undeniable quality and promoting aesthetic values. Moore thought that "goodness" was not definable in non-moral terms, but nevertheless depended on natural properties in that, if two entities shared all their natural properties, they must also share all their moral properties. Hence, according to Moore, moral properties supervene on natural ones. Moore used the notion of supervenience (without explicitly using the term) to tie normative judgements to descriptive facts without defining equivalence. Since supervenience only requires that one set of facts be sufficient for another, it allows for a weaker form of dependence than the traditional search for individually necessary and jointly sufficient conditions, conditions which are notoriously hard to find in normative debates. Opting for the weaker relation of supervenience is one way to assert dependence without claiming to have identified the full set of necessary and sufficient conditions. The notion of supervenience was more far-reaching than Moore probably anticipated. In economics, for example, a similar notion describes the relationship between micro-level and macro-level explanations; if all facts about microeconomic behaviour are set, so too are those of the macroeconomy. In *The General Theory* (1936) Keynes constructed a model for the macroeconomy where central aggregated variables were determined. By this construction Keynes marked a clear shift from microeconomics to macroeconomics. Thus, it is natural to assume that Moore's theories in moral philosophy affected Keynes also in his thinking of the economy.

Keynes criticised the classical dichotomy and argued that nominal shocks could have real effects because of worker unions and their reluctance against cuts in remuneration. He claimed that nominal

wage cuts was impossible to accomplish even in periods of high unemployment. Even if nominal wages could fall, he continued, this was unlikely to increase employment worth mentioning. Unemployment was, according to Keynes, caused by a demand deficiency. Thus, an increase in demand in a period of high unemployment will increase production without pressuring prices. In fact, with the help of his model Keynes showed that a little push in demand would have a multiplicative effect on total demand. Central in his reasoning/model was the consumption function that showed the effect of income on private consumption. With this function Keynes was able to explain the observed positive correlation between income and consumption by a relative fixed marginal propensity to consume, or conversely, that a stable share of the income was saved, at least in the private sector as a whole. Hence, an increase in income from an initial increase in demand and production will, he argued, increase demand, production and income further.

Consequently, the main prediction in the General Theory was that fiscal policy by itself is capable of generating a full-employment level of income. This was also his message politically. Keynes was sympathetic to Lloyd George's wing of the Liberal Party and spoke frequently favourably about their views. The pamphlet *Can Lloyd George Do It?* (1929), co-authored with Hubert Henderson, summed up his defence of the Liberal pledge to conquer unemployment by spending on public works such as road-building, municipal housing construction and the like. Keynes revolutionised the thinking of many economists only within a few years and politicians throughout the world followed his recommendations in the succeeding decades.

Although Keynes is known as one of the first opponent of econometrics, it is fair to say that Keynes was a logical positivist, or more precisely, a verficationalist. Logical positivism was a school of philosophy founded in Austria and Germany during the 1920s that was concerned with the logical analysis of scientific knowledge. Among its members were Moritz Shlick, Rudolf Carnap, Hans Reichenbach, Herbert Feigl, Philipp Frank, Kurt Grelling, Hans Hahn, Carl Gustav Hempel, Victor Kraft, Otto Neurath, and Friedrich Waismann. According to logical positivism, there are only two sources of knowledge: logical reasoning and empirical experience. The former is *analytic a priori*, while the latter is *synthetic a posteriori*; hence *synthetic a priori* does not exist. Although scientific knowledge does not exclusively rise from the experience, but also from theories as genuine hypotheses, experience is the only judge of scientific theories. Therefore it is crucial for developing scientific knowledge to shape scientific theories as testable or verifiable hypothesis. A statement is meaningful if and only if it can be proved true or false, at least in principle, by means of the experience. This is called the *verifiability principle*. We know the meaning of a statement if we know the conditions under which the statement is true or false. There are at least three fundamental principles of logical positivism:

1. The verifiability principle and its consequence. Keynes put great emphasis and effort into specifying his ideas so that they could be verified and tested. He worked hard to define all his variables in operational terms, relating them whenever possible to actual or potentially available data.

2. *Induction* is the logical structure of scientific theories. Logical positivists generally use the method of induction. However, Keynes did not think much of induction, but admitted that it was justifiable in certain circumstances, only "because there has been so much repetition and uniformity in our experience that we place great confidence in it" (Keynes (1921), p. 290). Nevertheless, although he called his theory a general one, it is no doubt that it was influenced by his own observations. For example, in the years preceding the publication of The General Theory Keynes was greatly concerned with the unprecedented high unemployment rates in the late 1920s. Most importantly, he was troubled by the fact that employment did not seem to catch up, not even after long periods of reduced real wages.

3. The meaning of probability. Inspired by Moore Keynes wrote *A Treatise on Probability* in 1921. By this work Keynes is considered as one of the founders of *logical probability.* Keuzenkamp (2000, p. 68) explains the logical theory by stating that "the occurrence of events is of interest only insofar as the probability of the occurrence of an event can be related to the truth of the proposition that the event will occur." Keynes regarded probability not so much as a formal logic but more as an intuitive logic. Probability was used to verify the truth of propositions.

Milton Friedman (1912-) and the monetarists

The main characteristic of monetarism is its positivistic methodology of evaluating theories by their predictions that Friedman advocated in his influential article *The methodology of positive economics* in 1953:

> "Viewed as a body of substantive hypotheses, theory is to be judged by its predictive power for the class of phenomena which it is intended to 'explain.' Only factual evidence can show whether it is 'right' or 'wrong' or, better, tentatively 'accepted' as valid or 'rejected.' ... the only relevant test of the *validity* of a hypothesis is comparison of its predictions with experience. The hypothesis is rejected if its predictions are contradicted ('frequently' or more often than predictions from an alternative hypothesis); it is accepted if its predictions are not contradicted; great confidence is attached to it if it has survived many opportunities for contradiction. Factual evidence can never 'prove' a hypothesis; it can only fail to disprove it, which is what we

generally mean when we say, somewhat inexactly, that the hypothesis has been 'confirmed' by experience." Friedman (1953, pp. 8-9).

Friedman started out the essay by following up on Keynes' effort to stress the significance of separating positive economics from normative economics, this places him philosophically as a positivist. However, it has shown to be hard to attach Friedman to a particular school of thoughts. When Friedman, in the citation above for example, says that "factual evidence can never 'prove' a hypothesis; it can only fail to disprove it" he talks like a Popperian. This falsificationist approach, also called the demarcation criteria, is what most prominently distinguishes Popperianism from those of logical positivism. It is also adjacent to call him an empiricist in light of his predilection for factual evidence. On the other hand, a dispute between David F. Hendry and Neil R. Ericsson shows his distrust of using (only) "sophisticated econometric techniques" to test the validity of a hypothesis[6]. Furthermore he is also often labelled an instrumentalist because of his advocacy for the necessity of unrealistic assumptions in theories.

Milton Friedman has probably been the foremost critic of the Keynesian ideas. Friedman's advocacy of monetarism in Friedman (1956) has consisted of a revival of the *quantity theory of money*, reasserting that changes in the money supply explain changes in the levels of prices and economic activity. Keynes has got it all wrong, he says in a conversation with Mark Blaug (1990, p. 81-89); the Great Depression in the 1930's was caused by erroneous monetary contraction and not by demand deficiency. In fact, a change in demand is unlikely to have such consequences on production and employment at all. The Keynesian model has at least two serious pit falls, according to Friedman. The first was Keynes assumption that a relatively fixed share of the income was saved. Friedman (1957) developed *the life-cycle hypothesis* that contradicted this assumption. He argued that individuals tend to prefer a relatively fixed consumption across their life span. Consequently, a drop in income would more or less be fully compensated by a fall in savings. Secondly, money demand is not, as Keynes claimed, determined by the publics' speculative motive, but rather by their need for money for transaction purposes. This typically monetarist view implies that the demand for money is likely to follow the economic activity. A fall in demand will lower the demand for money and, consequently, reduce interest rates substantially. Furthermore, in contrast to Keynes Friedman believed that investments, consumption and thereby production was relatively sensitive to changes in the interest rate. Hence, Keynes' view that the Government should spend its way out of a recession was likely to be unsuccessful according to Friedman; the increased income will not increase consumption worth

[6] See Hendry and Ericsson (1991) and Friedman and Swartz (1991).

mentioning, only increase saving, and an increase in money demand will increase interest rates and crowd out investments instead.

Keynes' assumption that increased demand would not cause any price pressure was obviously too naive. In 1958 A. W. Phillips showed that unemployment and the rate of change of money wage rates in the United Kingdom during the period 1861-1957 were consistently negatively correlated. This correlation was later called the Phillips curve and has been tremendously influential. Milton Friedman (1968) modified the Phillips curve by incorporating adaptive expectations[7] arguing that in the not too long term the Phillips curve is vertical, i.e. that there is a *natural rate of unemployment* regardless of the inflation rate. Hence, according to Friedman there is no permanent trade-off between inflation and unemployment. However, the monetarist view that the money supply effectively determines the level of activity implies that the monetary policymakers may play a role in fighting unemployment in the short or medium term. However, Friedman did not recommend such a strategy either because although this may be effective in the short run, he argued, this could in fact harm the economy in the longer run. He asserted that if unemployment were kept under the natural level of unemployment inflation would not only stay at a high level, like Phillips had told us, but also in fact accelerate. Since monetary policymakers, according to Friedman, cannot know the exact level of the natural rate of unemployment there is a genuine risk of asserting a permanent excess demand for labour which cause wage-price spirals. Friedman and his fellow monetarists believed that both the product and labour markets operated best on its own and that the best monetary policy was a neutral and transparent one.

Robert E. Lucas (1937-) and the new classical economists

Friedman and the monetarists were the precursors of a new school of thoughts known as new classical (macro)economics advocated by Robert E. Lucas. Although the school was labelled "monetarists mark II" by James Tobin (1981) because of their similar policy prescriptions Lucas started out by criticising both Keynesians and Friedman. After all, Friedman accepted the short-run trade-off between unemployment and inflation, thus Keynesians still argued in favour of state intervention in order to keep unemployment at its natural rate. The dispute between Friedman and the Keynesians was merely an empirical question; how sensitive is money demand to changes in the interest rate? How fast will unemployment return to its natural level? What are the consequences of a demand shock? Theoretically they agreed on almost everything.

[7] Friedman believed that expectations were formed by that agents expect the same inflation rate next period as in this period, adaptively.

Lucas (1972a, b) was intrigued by the implication of Friedman's adaptive expectations assumption, namely that rational economic agents would persist in systematically mistaking the inflation rate. Instead, Lucas argued that agents have *rational expectations*. He believed that agents foresee everything but unexpected shocks and these are purely of a stochastic nature. The implication of the rational expectation notion was instantaneous market clearing. Consequently, when hit by an unexpected shock the economy will immediately return to the vertical Phillips curve. Furthermore, since expected shocks will not have any effect on the economy at all, authorities can not systematically surprise the public in order to generate consistently higher levels of inflation and employment. Such a policy will fail. Lucas left no hope for the government to systematically do the unexpected.

The new classical economists have been troubled with two important empirical facts since the beginning: If the economy is at equilibrium, even in the short run, why do we observe an empirical stable short run Phillips curve, and why do we experience business cycles, i.e. the serial correlation of aggregates such as production, consumption, investments, labour supply, employment, real wages, etc.? Lucas (1972a) tries to solve the puzzle of the short run Phillips curve by setting up a model where there is never any deviation from the natural rate of unemployment if the utility maximising agents have rational expectations and perfect information. However, agents have not perfect information, he continues, agents can observe the current nominal price of their own good, but not the aggregate price level. Thus the real price of their own good is unobservable. Next period, however, everybody knows the general price level. Thus, when the price of their own good rises, agents are faced with the problem of deciding whether the price rise represents a change in relative prices in their favour, which would suggest an increase in their output, or merely a rise in the general level of prices, which would leave relative prices unchanged and suggest no change in their output. Experience will undoubtedly have taught them that part of most price rises is a change in relative prices and part is a change in the general level of prices, hence, unexpected changes in prices will increase output as predicted by the short run Phillips curve. However, next period, when relative prices are observed, output and employment fall back to their original levels.

The question of the existence of cycles was first sought answered by Lucas in 1969. Lucas says in a conversation with Klamer (1984, p. 35) about Lucas' article *Real wages, Employment, and Inflation* co-authored with Rapping in 1969: "We were trying to cook up simple supply and demand models which would fit what you see happening over business cycles." Their ideas became essential for the new classical economists' market-clearing models of the business cycle, i.e. Equilibrium Business Cycle Models. In their 1969 article Lucas and Rapping argued that current leisure and future leisure are close substitutes while current leisure and current consumption are less so. Thus, when the real

wage falls, yet is expected to return to its "normal" level in the future, the price of current leisure has fallen relative to future leisure and less labour is supplied. As a consequence economic fluctuations are optimal responses to shocks and explain why an economy may have economic stagnation in equilibrium. Lucas and Rapping suggested that involuntary unemployment do not exist, in fact unemployment is best seen as anticipated demand for leisure.

In *An equilibrium model of the business cycle* (1975) Lucas sought to explain the empirical serial correlation in output and its co-movements with consumption, investment, employment, interest rate and nominal prices. Lucas believed that business cycles arise from unanticipated serially correlated shocks in the money supply. As in Lucas (1972a) agents were assumed not to have perfect information in this model, i.e. agents could not distinguish between relative and nominal price changes. Now, after an unanticipated serially correlated shock in the money supply, Lucas said, can agents only gradually attribute the shock to its cause. However, expectations and the actual relative prices gradually converge, so that output and employment eventually return to their (new) trend paths. This gradual convergence look like those predicted by the adaptive expectation model. However, expectations are rational in this model, and gradual adaptation of expectations to actual values arises not from failure to use information, but from an optimal response to price signals. Hence, the economy is in equilibrium at all times. Another source of cyclical behaviour stems from that changes in output also affect investments and the anticipated level of the capital stock. Increased prices, say, stimulate investments that, in turn, slow down the initial rise in prices. With prices rising more slowly, it also takes longer for producers to learn that the increase is not all that favourable. Hence, the shock in output and employment persists longer than it otherwise would. More recent studies of new classical economists oppose the idea that monetary shocks are the main cause of business cycles. Instead, they believe that real shocks are more important[8]. Advocates of the Real Business Cycle Models argue that what appears to be cycles are caused by agent's optimal adjustments to random shocks in productivity. Nevertheless, all new classical economists agree on that all markets clear at all times.

Methodologically new classical economists criticise the positivistic views of the monetarists as well as the Keynesians and other empiricists. While empiricists look for causal relationships within closed systems, idealists like the new classical economists, focus on complexities by modelling all parts of the economy. New classical economists see the world as much too complex for anyone to generate any general knowledge from it by studying closed systems, i.e. ignoring parts of the economy. It is for that reason idealists cannot completely trust observations because it is not possible to isolate marginal effects from net effects. Furthermore, according to new classical economists, since aggregate

[8] See Hoover (1988, ch. 3).

phenomena are the sum of individual action, such phenomena must be analysed by studying individual behaviour. The simple Keynesian macroeconomic models lack such *microfoundations* and are therefore inadequate, they argue. Accurate prediction and empirical consistency are neither necessary nor sufficient for generating general laws, according to new classical economists. However, they recognise that such qualities are important for judging a theory. Nevertheless, central in the methodology of new classical economics is to take everything into consideration and recognise the complexity of the economy in order to predict and understand aggregated phenomena. Consequently, by using mathematical workmanship and methodological techniques new classical economists model all individual agents in the economy by assuming rational and optimising behaviour in so called General Equilibrium Models. The starting point from which the whole model is calculated from is the utility functions of representative agents who are governed by a few axioms, i.e. that preferences are complete, reflexive, transitive, continuous, and strongly monotonic.

The methodological differences between Friedman and new classical economists are distinct. While Friedman is a Marshallian, after the economist Alfred Marshall, the new classical economists are Walresians, after Léon Walras who belonged to the Austrian school and who is regarded as the original "manufacturer" of the General Equilibrium Models. Marshall, on the other hand, may be characterised as an advocate for partial equilibrium theory. Friedman regards theory as an "engine for the discovery of concrete truth"[9]. Although he recognise the interdependence between all parts of the economy, he favour simplicity, which mean excluding those parts that are not important for the central ideas in the theory. Even though Friedman also recognises the importance of microeconomic foundations he would rather regard a whole industry, for example, and not the single firms within it because they act similarly on the issues in question. Friedman does not put much value into mathematical elegance and generality. Walrasians, on the other hand, reverse the order, placing greater value on mathematical elegance and generality. According to Friedman a theory should be judged by its ability to predict and not by the unrealisticness of its assumptions.

The methodologies of new classical economists look very similar to those of the neo-Kantian approaches of the Austrian economists in the late nineteenth century. And it is true that this approach had a profound effect on new classical economists. Where Austrians talk about methodological individualism new classical economists talk about microfoundations, ideal types is replaced by representative agents, the notion of open systems is materialised in General Equilibrium Models, new classical economists use the principles of marginal utility with *synthetic a priori* assumptions and both schools use the notion of rationality. For example, Lucas seems to agree with Menger's focus on

[9] Friedman (1949, p. 490).

individuals, Lucas (1987, p. 57) says that real social science is an "attempt to model, to understand human behaviour by visualising the situation people find themselves in, the option they face and the pros and cons as they see them". In the Austrians eyes macroeconomics is redundant because the relationships between aggregates are no less that the sum of individual behaviour. Also on this point Lucas agrees, Lucas (1987, p. 107-8):

> "The most interesting developments in macroeconomic theory seem to me describable as the reincorporation of aggregative problems such as inflation and the business cycle within the general framework of 'microeconomic' theory. If these developments succeed, the term 'macroeconomic' will simply disappear from use and the modifier 'micro' will be superfluous. We will simply speak, as did Smith, Ricardo, Marshall and Walras, of economic theory."

However, there are also distinctive differences between new classical economists and Austrian economists. One difference is that the Austrians was against that economists should be engaged in using mathematics because it dealt with quantities, not essences, and led to arbitrary statements. Hence, where new classical economists use mathematics Austrians use words. However, according to Hoover (1988, ch. 10) the most fundamental distinction between the two schools is on the issue of business cycles. Hoover finds evidence supporting the view that although new classical economists in general and Lucas in particular saw the equilibrium nature of new classical business cycle models as closely related to the Austrian analysis, it is exactly on this issue where the differences are clearest. The fact is, according to Hoover, that Austrians acknowledge that the economy may not be in equilibrium because of rigidity in wages and prices. Furthermore, while new classical economists build their models by assuming that a representative individual represents all individuals, Austrians focus on the complexity and the variety of knowledge within the economy. Austrians argue that the representative individual approach is exactly the fallacy of macroeconomics since it is a closed system. Yet another example of their differences is that while new classical economists assume that preferences are constant Austrians argue that taste may change. The new classical notion of rational expectations has also been contrasted to the Austrian notion. Mises ([1949] 1966, p.105) and Hayek (1952, p.51-2) for example argue that rationality does not mean that humans have no free will and that they only react in accordance with rules as implied by the rational expectation notion of new classical economists. It means that humans act in order to reach some non-specified ends.

New Keynesian Macroeconomics

New Keynesian macroeconomics, or Post Keynesianism, arose in the 1980s as a response to the critique by new classical economists that Keynesians did not present any microeconomic foundations

for their view that there exist nominal price rigidities causing prolonged business cycles. Contrarily, new classical economists showed that the existing microeconomic theory suggested that all markets clear instantaneously. So new Keynesians like N. Gregory Mankiw, David Romer, George A. Akerlof, Janet L. Yellen, Stanley Fischer, John Taylor, Oliver J. Blanchard, Robert M. Solow and Alan S. Blinder sought in various ways to give Keynesian economics microeconomic foundations[10].

New Keynesians criticised the new classical economists mainly on four grounds. First, there is asymmetric distribution of information. Second, the rational expectation model assumes fully flexible prices. This is obviously not the case. Agents engage in price contracts so that unexpected price changes have long lasting effects. In addition, since there are costs attached to changing prices and since there are continuously shocks in the economy, we may be far from the anticipated level for long periods. Third, rational expectations may not exist in all markets such as in the labour market or in the goods market. Fourth, assumptions in the general equilibrium theory, such as competitive markets, that those who search gets work and that there are no costs attached to establishing new businesses, are not realistic. In fact, most markets are characterised as being monopolistic, there are many unemployed who are willing to work at the going wage rate, and there are considerable barriers for those who want to start new businesses. In Mankiw and Romer (1991) all these things, and others, are shown to potentially cause prolonged out of equilibrium demand deficiencies. Although new Keynesians accept the rational expectation theory in principle and although not all of them argue for a role for policy in stabilising output, they all agree on that there are nominal and real out of equilibrium rigidities causing business cycles.

New Keynesian macroeconomics has been characterised widely as (critical) realist[11]. Their goal is to increase the understanding of the causal structures underlying real processes. This must be contrasted to empiricists who simply identify causalities in events. Realists believe that objects have underlying properties and structures that potentially may be discovered. However, the properties may also stay undiscovered. These properties exist regardless of being observed in experiments or not. While new classical economists see social structures within open systems, new Keynesians also regard the system as organic. Therefore, according to new Keynesians it is epistemologically necessary to segment analysis by employing different theories to focus on different processes within the system. New Keynesian macroeconomics is founded on the belief that the best way to build up knowledge of an organic economic system is to employ a range of different methods and angels of incidences. They believe that in order to generate knowledge, i.e. reduce uncertainty, we must decide which partial

[10] See Mankiw and Romer (1991)

[11] See Dow (1990), Arestis (1992), Lavoie (1992) and Lawson (1994).

forms of knowledge to pursue. The methods of analysis range from formal models, institutional analysis similar to the methodology of political economy, historical analysis, econometrics and interface with other disciplines like sociology and psychology, and more. Nevertheless, it is important to emphasise that new Keynesians (and critical realists) see knowledge as being imperfect, that the organic processes of the social world are too complex to generate any general knowledge from. As a consequence new Keynesians believe that the scope for prediction is limited to tendencies, event predictions are not justifiable. Hence, new Keynesians are generally concerned with ontologically questions not very dissimilar to those of idealists like Austrian economists. However, there is particularly one clear distinction between the two schools of thought. New Keynesians reject to the extremely individualistic methodology of Austrian economics. New Keynesians are aware of the role played by institutions and conventional behaviour interfering with individual utility.

New Keynesians emphasise that their "human logic" is more suitable for application to open systems than the "classical logic". They are concerned with looking at relevant evidence and common sense rather than complete mathematical analysis. In organic systems all mechanisms are not known, therefore we cannot apply one set of axioms for the whole system. Instead different assumptions are needed for different partial analysis. In new Keynesian macroeconomics no methods are excluded except those who assert that their methods are complete.

What have we learned from the disputes of the past?

In this essay I have tried to give a historical outline of some of the major macroeconomists and their schools of thought. However, it must be emphasised that there are different views about what are central in their legacy and methodology. As in all other scientific work it has been necessary to single out what I find the most important characteristics of each subject. An important tool in this respect is some sort of classification system.

To sum up what I have discovered in this work, it strikes me that there seems to have been a pendulum that has swung between basically two methodological approaches to knowledge construction in one dimension, and independently, between two policy prescriptions in another dimension. Of course, if I were to choose one single notion that would describe the history of macroeconomic thought it would be *pluralism*. But still, an everlasting methodological dispute seems to be weather one should rely on sensation or on imagination to accumulate scientific knowledge. It is indisputable that all the different schools acknowledge that experience is important in this process, but they disagree on the role it plays. While Austrian economists and new classical economists emphasize *synthetic a priori* assumptions, Friedman and the monetarists believes that "predictability is the only relevant test of the validity of a

hypothesis". In this dispute Keynes and new Keynesians place themselves somewhere in the middle. Keynes did not think much about econometrics and induction, but may still be thought of as one of the founders of the probability approach to logical positivism. New Keynesian economists accepted much of the critique by the new classical economists that Keynesian macroeconomics was not solidly based on idealistic reasoning. Hence, new Keynesian macroeconomics managed to develop theories explaining the existence of out of equilibrium business cycles with microeconomic foundation. In the other dimension the pendulum has swung between policy prescriptions, and interestingly, methodological enemies are now best friends. While Friedman agrees with the Austrians and the new classical economists that the economy best operates on its own, he disagree with Keynesians who see a role for the state to intervene. Furthermore, there are new Keynesian economists who argue that the economy is out of equilibrium for long periods, but who do not recommend any state interference[12].

I do not find any indication that the pendulum has stopped swinging in any direction. If anything I believe that there seems to be two parallel courses at the present, one theoretical and one empirical. An unscientific investigation of the number of hits on *Econlit* (an electronic economic library) reveals that while the word theory was associated with 200,000 entries, the words empirical and econometric were associated 100,000 entries. Similarly, the dispute between advocates of state interference and those who argue against this seems to be just as loud as before. Hence, one conclusion to this essay would be to say that although we have learned much from the great disputes of the past, there seems to be no clear answers to the difficult questions that we still face.

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[12] See Mankiw and Romer (1991, p. 3).

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