NEW KEYNESIAN ECONOMICS IN PERSPECTIVE

David Colander
Middlebury College

In the 1990s the term, New Keynesian macroeconomics, is being used with increasing frequency, leading some economists to question whether their profession has gone classification crazy. At a minimum it has left many in the profession wondering what the term, New Keynesian, as opposed to Neo-Keynesian or Keynesian, means. To some extent, I agree with this view. The way many economists, especially Mankiw and Romer [1991], have used the term New Keynesian is confusing and does not help clarify important distinctions among macroeconomists. New terms should clear up confusion, not add to it; they should direct nonspecialists to the central issues at debate. But initial terminological confusion can often lead to clarification, and can be part of the process by which our understanding of the issues advances. New Classical is such a term; it was which our understanding of the issues advances. New Classical is such a term; it was

Elsewhere [Colander 1991; 1992] I have criticized Mankiw and Romer's [1991] use of the term, New Keynesian, arguing that it is subject to a similar type of criticism as that made by Frank Knight of Keynes. Knight argued that some things that Keynes said were new and some things that he said were true, but, unfortunately, the things that were new weren't true, and the things that were true weren't new. Similarly, I argued that while some of what Mankiw and Romer call New Keynesian is new, and some of it that while some of what Mankiw and Romer call New Keynesian is new, and some of it that

In these articles I offered an alternative definition of New Keynesian economics that I claimed was worth the trouble of learning and should enter economists' vocabulary for the simple reason that the term New Classical economics entered into economists' vocabulary. Under my proposed definition the emerging New Keynesian literature is work in which the central Neo-Keynesian/Neo-Classical issue of wage-price flexibility is almost irrelevant; instead in New Keynesian work institutional coordination failures, macroweaknesses, and interdependencies lead to the existence of multiple equilibria making real the possibility of aggregate X-inefficiency. The economy is in aggregate equilibrium, but there is a preferable equilibrium which, given existing coordinating institutions, the economy cannot reach without some type of new collective action.

Thinking about the macroeconomic problem in this way requires a radical shift in approach; this is not your teacher's macroeconomics. But it is the basis of a solid base of a solid

New Keynesian economics opens up a whole new front in the Keynesian/Classical debate, a front in which it is not Keynesians who are seen as adding ad hoc assumptions to the more general New Classical model, but it is New Classicalists who are adding ad hoc assumptions to the more general New Keynesian model. In this emerging literature New Classicalists are directly appealing to Keynesians in their own general equilibrium terms. Thus, the nomenclature issue is more than a terminological debate. It is a debate

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### CHART 1

New Keynesian Economics in Perspective

<table>
<thead>
<tr>
<th>Macroeconomic Schools</th>
<th>Classical</th>
<th>Keynesian</th>
<th>Classical</th>
<th>Keynesian</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Modeling Techniques</strong></td>
<td>Informal; based on Quantity Theory and Say’s Law</td>
<td>Informal; based on simple income-expenditures model</td>
<td>Semiformal; focused on IS-LM model</td>
<td>Formal; based on general equilibrium, Say’s Law, Quantity Theory, rational expectations and market clearing</td>
</tr>
<tr>
<td><strong>Institutional Backdrop</strong></td>
<td>Informal; contextual</td>
<td>Informal; contextual</td>
<td>Semiformal; endogenous</td>
<td>Noncoventional, nonanalytic; although it employed the importance of context is decisive which equilibrium will be attained</td>
</tr>
<tr>
<td><strong>Monetary Theory</strong></td>
<td>Quantity Theory, dichotomy between real and nominal sectors</td>
<td>Unclear how money sector is integrated into real sector</td>
<td>LM curve rather elastic; dichotomy broken by Keynes effect</td>
<td>Money is part of production function; dichotomy inherently broken</td>
</tr>
<tr>
<td><strong>Explanation of Unemployment</strong></td>
<td>Wages rigidities</td>
<td>Cyclical fluctuations; most fall of demand</td>
<td>Wage rigidities</td>
<td>Model predicts unemployment, wage rigidities would cause unemployment</td>
</tr>
</tbody>
</table>

from Neo-Keynesian economics, and Axel Leijonhufvud (who also differentiated the economics of Keynes from Neo-Keynesian economics). Through these economists’ work the negative distinction has become a standard distinction.

Classical macroeconomics (no prefix) refers to the macroeconomics of such writers as David Ricardo and John Stuart Mill. It centers around Say’s Law (MV = PQ); it does not focus much on unemployment. Inflation is seen as a monetary phenomenon which, because of an assumed dichotomy between the real and nominal sector, can be considered separately from the real economy. The arguments in Classical economics are generally not formally presented, and those arguments often combine political and philosophical issues with economics issues. Classical thought is contextual thought which can only be understood in relation to the institutional context in which it is written. It was macroeconomics until the late 1920s.

New Keynesian macroeconomics (no prefix) generally refers to the macroeconomics found in The General Theory [Keynes, 1936]. It is an informal contextual treatment of macro issues similar to the informal contextual treatment of Classical economics. It rejects both Say’s Law and the Quantity Theory of Money, and hence comes to different conclusions about macro policy than does Classical economics. It argues that less than full-employment equilibria can exist. It incorporates some type of a multiplier process in the analysis, but does not relate that process to individual choices. It contends that fixed wages are not the cause of recessions or unemployment but does not formally show how, without that assumption of fixed wages, recessions and unemployment can exist. There are probably eight or nine different interpretations of Keynes’ ideas, so what is really Keynesian economics is subject to dispute.

**THE “NEO” DEBATE**

The historical debate between the Keynesians and the Classical has had many dimensions — political, policy, behavioral — in the 1950s and 1960s and seemed to continue without end. A variety of attempts to formalize that debate, and hence say precisely what it was that differentiated Keynesians from Classical, led to the adding of the “neo” prefix to both Keynesians and Classical. Thus, the terms Neo-Classical and Neo-Keynesian developed as the Keynesian/Classical debate focused on certain aspects of the broader Keynesian/Classical debate which could be presented in a formal model.

By adopting a common formal model, the Neo-Keynesians and Neo-Classical came to an agreement on what issues they disagreed upon. Thus the “neo” prefix refers to Classical and Keynesian ideas translated into a specific formal model. Neo-Keynesian and Neo- Classical variants of that formal model are what most non-macroecologists think of as Keynesian or Classical economics, but to a macroecologist, they represent a debate that is of much narrower scope than is the Keynesian/Classical debate.

Neo-Classical macroeconomics is similar to Classical macroeconomics (Keynes grouped the two together), but it is more formally presented (i.e., it can be reduced to a relatively simple set of equations) and it is less reliant on political and philosophical insights. Nonetheless it retains a contextual perspective. It combines partial equilibrium analysis with the two Classical propositions — Say’s Law and the Quantity Theory of Money — to arrive at the same formal conclusions as does the Classical school.

Although the Classical school in the work of Dennis Robertson and A. C. Pigou was evolving into the Neo-Classical school before Keynes, what is now called the Neo- Classical model developed as a juxtaposition to Neo-Keynesian macroeconomics. In a sense, Heclo’s famous article, *Keynes and the Classics* [1957], created both Neo-Classical and Neo-Keynesian macroeconomics.

Neo-Keynesian macroeconomics is a semi-formal representation of Keynesian ideas centered around Hicks’s IS/LM model. It corresponds to Neo-Classical economics. The Neo-Keynesian model differs from the Neo-Classical model in its estimates of elasticities of the demand for money and in its assumption of fixed nominal wages. Eliminate these from theNeo-Keynesian model and one arrives at the Neo-Classical model.

The debate between the “neos” centers around empirical estimates of elasticities of the demand for money (and hence the shape of the LM curve) and the reasonableness of a fixed nominal wage assumption. Neo-Keynesians argue that the fixed nominal wage and price assumptions are reasonable; Neo-Classicals argue that they are not.
New Keynesian models are general equilibrium models that implicitly accept Say's Law and the Quantity Theory. They relate these assumptions to individual choice theory using rational expectations, microfoundations of macro, and market clearing assumptions. In doing so, New Classical economics tries to understand all macro issues within a general equilibrium framework. It focuses on the Lucas aggregate supply curve which is a perfectly inelastic aggregate supply curve at full employment. That Lucas supply curve formally embodies what I call the Classical Corollary to Say's Law: Supply creates its own demand at the level of income that society desires.

The New Classical revolution had the effect of freezing the debate from the rather stale debate that had characterized the "neo" debate, opening up a much wider debate front. It brought significant responses from Keynesians.

As the term, New Classical, came into wide use in the 1980s, the rise of the term, New Keynesian, was inevitable. Initially, the New Keynesian terminology was used by myself and others to describe the general Keynesian response to the New Classics. It is this loose use of the term that has caused confusion and led me to the conclusion that the definition must be refined if it is to be useful. My definition of New Keynesian is useful precisely because it separates out those Keynesian responses that refer to the debate to old "neo" debates about fixed nominal wages or prices from those responses that broaden the debate front between Keynesians and Classics back to the questions of the nature of general equilibrium of a monetary economy. I am now convinced that only the latter can be usefully designated as New Keynesian. Hence, my plea for a more limited and useful definition that distinguishes it from Ne-Keynesian models.

The only literature I now believe should be called New Keynesian is that literature which asks questions that can be answered in a general equilibrium framework.Posing the question within a partial equilibrium or limited multimarket framework is the hallmark of the "new" debate. New Keynesian economics does not ask questions that can be posed in a limited framework because it is initially (and it is only in its initial steps) interested in more fundamental questions.

It starts from the premise that macroeconomic questions must be answered sequentially. One must first determine the general institutional framework within which one is to pose macroeconomic questions. In considering that question the New Keynesian literature challenges two interrelated New Classical assumptions: the assumption of a unique general equilibrium and the assumption that there is no need to establish the macro foundations of micro simultaneously with the microfoundations of macro.

Giving up these assumptions leads to the possibility of macro externalities—results of individual decisions on macroeconomic goals that affect other individuals, but that are not internalized (optimally coordinated) by the market structure. Macroeconomic externalities come about because of individual choice interdependences for which markets (collective coordinating institutions) have not developed to internalize them. These interdependences might be expectation interdependences or other types of interdependences. Their existence can create an economy in which there are multiple equilibria to which it could gravitate, or they can lead the economy to a single non-optimal equilibrium. The models used to demonstrate these are usually highly abstract, game-theoretic models, with far less institutional detail than Neo-Keynesian or even New Classical models. But these more general models clearly bring out some of the ad hoc assumptions that are needed to arrive at New Classical results.
Starting from these highly abstract models almost any result is possible: there are infinite potential equilibria. To arrive at any model with a limited number of equilibria requires heroic institutional assumptions. The conclusions of macroeconomic models do not follow from theories; they follow from ad hoc institutional assumptions. The New Keynesian position is that broad institutional assumptions, not questions of wage flexibility given an institutional backdrop of perfectly functioning markets, should be the central element of macroeconomic debate.

THE DISTINCTIVE ELEMENTS OF NEW KEYNESIAN THOUGHT

Using the above terminological backdrop, let me now be more explicit about why New Keynesian economics requires its own classification. I accomplish this by posing two questions central to the macroeconomic debate and comparing the New Keynesian answer with the Neo-Keynesian answer:

1. How can a macroeconomy get stuck at a less than full-employment equilibrium?
2. Should wages and prices rigidities be a fundamental research question of macroeconomists?

Neo-Keynesians answer these two questions as follows:

1. The macroeconomy can get stuck at less than full-employment equilibrium if there are not perfectly flexible wages and prices.
2. It follows that the answer to Question 2 is that the flexibility of wages and prices is a fundamental research question for Neo-Keynesian economists.

New Keynesian economics agrees with Neo-Keynesian economics that an under-full-employment equilibrium can occur only if wages and prices are less than perfectly flexible (or if there are corner solutions) but it does not see this question as worthy of the significant study at this point of development of the macroeconomic model. Hence, the Neo-Keynesian and New Keynesian answers to the second question are fundamentally different. Neo-Keynesian economics focuses on issues of wage and price flexibility; New Keynesian economics focuses on more general issues of coordination failures. Thus, in the work of New Keynesian economists, the distinction between wage and price level flexibility or unemployment.

Unemployment is a derivative issue to be considered only after certain difficult questions in general equilibrium have been resolved.

Pushing the issue of under-full-employment equilibria temporarily aside does not end the macroeconomic debate. The novel element in New Keynesian thought is the argument that aggregate equilibrium arrived at by individual choice is optimal. There can be what might be called aggregate X-inefficiency, which means the output is not at the desired level, or the level that could be achieved if individuals' interactions were better coordinated.

Thus, while agreeing that unemployment is important, and must ultimately be explained, New Keynesian economics first tries to understand potential inefficiencies that can develop in an aggregate economy within a general equilibrium framework. In fact, once the New Keynesian general equilibrium context is understood, it is reasonable to conclude that wage and price inflexibility might actually improve the economy's performance, making the New Keynesian argument consistent with the argument Keynes made in The General Theory that wage and price flexibility was not the issue in debate.

An Example of How Wage and Price Inflexibility Might Improve Aggregate Efficiency

Within a New Keynesian model the economy can have coordination failures which the existing market institutions do not resolve. These coordination failures mean that even with complete wage and price flexibility an economy can arrive at an equilibrium with lower output than could be arrived at with alternative institutional coordinating mechanisms. Let us consider an example. Say that the wage economy with perfect wage and price flexibility can arrive at two general equilibria, one with an output of 1,000 widgets and one with an output of 400 widgets, and the social utility is directly related to output. Both are full-employment equilibria but the first equilibrium has a much higher output, and hence real wage, than the second. Assume that given the institutional structure there is no way, relying on individuals' actions alone, for it to move to the 1,000-widget equilibrium once it has arrived at the 400-widget equilibrium. However, say that by collective action — specifically, establishing institutional conventions that limit wage and price flexibility — the economy can move to a new equilibrium with some unemployed resources in which it produces 600 widgets. As long as the cost of that collective action is less than 400 widgets, that unemployment equilibrium has higher net output than the 400-widget full-employment equilibrium, and could be a Pareto improvement if some means of compensating the unemployed can be designed? Why not move to the full employment equilibrium of 1,000 widgets? That depends upon getting individuals to accept certain coordinated mechanisms that, collectively, they may not be willing to accept, or that cost more to implement, so the net available social output is less.

In the New Keynesian framework these issues of what equilibria will be arrived at become fundamental to macroeconomic analysis. Thus, an important part of the New Keynesian research program is to show that multiple equilibria situations can describe the economy, and show that limiting wage and price flexibility might be able to improve on that equilibrium.

Is it possible that the aggregate economy can be at full employment, but nonetheless operate at less-than-ideal output? In the New Keynesian technical models, the answer is definitely yes. They have shown that it can, but those models are highly abstract and the question remains whether they carry over to the real world: Can the models be reduced to a reasonably satisfying story? I believe the answer is "yes"; there are several reasonable stories one can tell to intuitively justify the existence of aggregate X-inefficiency. One of the stories is almost identical to the familiar no-profit Keynesian story of the multiplier. Individuals believe there will be low demand and in expectation of that low demand, they produce little and there is low output. In that story, uncoordinated expectations cause low output.
A Macrofoundation to Micro and Interdependent Choice

New Keynesian authors have shown that the above story is totally consistent with microfoundations and rational expectations. They have shown that to arrive at its unique equilibrium result New Classical economics makes what might be called the independence assumption: individual choice can be analyzed independent of the aggregate context. New Keynesian economics differs from New Classical economics by not accepting this independence assumption. It argues that the assumption is ad hoc and inconsistent with reality. A more general analysis of individual choice sees choices as interdependent with others' choices. Put another way, just as there is a macrofoundation to macro, so too is there a macrofoundation to micro which incorporates these analyses, and which must be considered before individual choice is analyzed.

Only by studying individuals' choices in their macroeconomic context can one understand interdependent choice. Without a variety of ad hoc assumptions, there are many different rational expectations. Depending on which of the many rational expectations individuals hold, many different equilibria are possible.

When one considers the microfoundations of macroeconomics, one comes away with a strong sense of indeterminacy; many possible aggregate equilibria are possible. The actual equilibrium at which the economy arrives can only be determined contextually, with a knowledge of people's prior history and of the existing institutions. The actual equilibrium can be path dependent and expectations can be self-fulfilling. For example, individuals' production could depend on their expectations of others' demands (and, rationally, expectations must). If individuals expect low demand, they will produce little and there will be low output equilibrium. Thus susnet equilibria and self-fulfilling expectations models are key areas of New Keynesian research.

The New Keynesian Production Function

The above conceptual discussion has, I hope, provided a sense of the New Keynesian vision. Let me conclude with a brief discussion of how that New Keynesian vision changes the macroeconomic model that we study and teach students. This New Keynesian vision will become part of the economists' terminology only if it is testable.

Neo-Keynesian, Neo-Classical, and New Classical macroeconomics all model the aggregate production function as a static technical phenomenon. It follows from this conception that an economy with perfectly flexible prices will be operating at peak efficiency. As I discussed above, New Keynesian economics challenges that conception of the production function and the conclusions that an economy with perfectly flexible prices will be operating at the socially optimal equilibrium. Specifically, it argues that such a specification assumes precisely that which is at issue — whether an aggregate economy will be operating efficiently. New Keynesian economics no longer assumes that an economy with perfectly flexible prices will operate at the socially optimal equilibrium. Multiple and nonoptimal equilibria are possible and existing market structures will not necessarily choose among these alternative equilibria.

Such issues can be added to the production function by including a new term, coordination, in the production function as in the following:

$$X = f(K, L, C).$$

The coordination variable, C, can cause the production function to shift around; it makes it technically possible for the same inputs to be associated with different levels of output. The New Keynesian research agenda is to examine and understand that coordination factor and how it interrelates with markets.

That research program necessarily involves institutions which in the New Keynesian view have two roles: to coordinate individuals' expectations about others' actions and to coordinate individuals' actions, given expectations. All other schools of macro have focused on the second of these two roles and have concluded that perfectly flexible price markets optimally coordinate individuals' actions. New Keynesians argue that is not necessarily true.

Thus for New Keynesians, the aggregate production function does not provide a fixed point around which fluctuations occur, as does in the New Classical model, or a point of departure to look for deviation from perfect competition, as it does in the Neo-Keynesian model. Instead, New Keynesian economics challenges the basic assumption of the traditional approach and eliminates that fixed point. The existing institutional structure will determine which equilibrium the economy will reach; theory will not. Thus, ironically, the highly abstract New Keynesian economic analysis makes a study of institutions central to the analysis of macroeconomics. In doing so New Keynesian economics returns Keynesian economics to its role as the general theory which allows multiple equilibria, and makes Classical economics a specific theory that follows from Keynesian theory if one makes certain ad hoc institutional assumptions.

In New Keynesian economics, markets (and hence money) and the conduct of monetary and fiscal policy are seen as technical phenomena that might increase the efficiency of aggregate production. They can cause the aggregate production function, and hence the supply curve, to shift. They affect the economy not through demand given supply, but through the coordination variables. They are inherent in the institutional structure and cannot simply be added on to a model assuming an institutional structure that does not include an explicit analysis of them. Similarly, in New Keynesian economics money is inherent in the aggregate production function. It assists in coordinating the economy and monetary issues must be analyzed within a framework of a real-world monetary economy.

This addition of coordination to the production function changes the nature of the questions raised by macroeconomists from policy questions, given institutions, to institutional questions. Since whether a change is seen as a policy or an institutional question depends on the model, not the change being talked about, all the traditional macroeconomic questions can be asked. They now become questions relating to aggregate production function, not questions to be tackled onto an implicitly assumed institutional structure.

CONCLUSION

The above discussion has been brief, but I hope, has conveyed the major departure that New Keynesian work is making. It is not talking on microfoundations to the existing Neo-Keynesian model; it is instead searching for the appropriate microfoundations for macroeconomics. If successful it will not only change the way economists think about macro, but will also change the way they think about micro.
WOULD KEYNES BE A NEW KEYNESIAN?

Paul Davidson
University of Tennessee

The principle of a truth in labeling law that protects consumers' from false and misleading claims is often violated by economics textbooks. Under the truth in labeling law, a minimum quantity of beef is required in a patty before society permits anyone to sell it as a hamburger. Similarly some minimum quantity of Keynes's logical analysis should be an essential ingredient in any theory sold as Keynesian, especially in textbooks to yet uneducated consumers. Paraphrasing a famous slogan of the 1983 Democratic presidential primary, "Where's the Keynesian beef in New Keynesian economics?"

This paper demonstrates that (1) New Keynesian Economics (hereafter NKE) does not contain any of Keynes's logical building blocks, and (2) NKE leads to policies that are the opposite of what Keynes advocated as solutions to the major problems facing real world economies.

WHAT IS NEW KEYNESIAN ECONOMICS?

In his article "What is New-Keynesian Economics?", Gordon (1990) claims that Parkin (1984) was the first to use the term "New Keynesian." Parkin (personal fax, 6 June 1991) claims that his original definition of NKE was "a class of models of the labor market that assume rational expectations and fixed term multiperiod possibly but not necessarily overlapping wage contracts." Parkin contrasted this with his original definition of New Classical Economics (NCE): "A class of models of the labor market based on rational expectations and market clearing." NKE is a "theory of aggregate supply" (Parkin, 1984, 74); it puts an ad hoc constraint on the classical aggregate supply curve by assuming a short-run fixity of nominal wages.

Parkin indicates that he would now propose new and different definitions for both NKE and NCE. He now defines NCE as "a research program that seeks to explain aggregate fluctuations as the consequence of perfectly coordinated Pareto efficient intertemporal substitution," and NKE as "a research program that seeks to explain aggregate fluctuations as the consequence of impediments to the coordination of the choices of rational agents who are individually maximizing but who are collectively prevented from achieving a Pareto efficient allocation" (personal fax, 6 June 1991). This new set of definitions changes the NKE emphasis from a per se fixed money wage system to one where coordination failures can induce (short-run?) nominal fixities and thereby cause unemployment equilibria.

Gordon defines NKE as "research within the Keynesian tradition that attempts to build the microfoundations of wage and price stickiness" (1990, 1116, italics added). Gordon insists that "price setting behavior is the essence of Keynesian economics. Any attempt to imbed it in macrofoundations must begin from monopolistic or imperfect competition" (Gordon, 1990, 1136). The NKE game plan "is to tease a failure of macro markets to clear from a starting point of rational expectations and the maximization of profits and individual welfare at the micro level" (Gordon, 1990, 1137). "Any satisfactory explanation of business cycles that warrants the label Keynesian must incorporate not just price stickiness, but ... [must also recognize that] the necessary condition for

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