NEW KEYNESIAN ECONOMICS IN PERSPECTIVE

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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 added to economists' vocabulary in the 1980s because the work it described made a fundamental shift away from Neo-Classical thinking. The term made clear the major shift in thinking that was inherent in New Classical work.

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 is Keynesian, unfortunately the things that are new aren't Keynesian, and the things that are Keynesian aren't new.[1]

In those 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 same reason that the term New Classical economics entered into economists' vocabulary.[2] 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, macroexternalities, 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 emerging Keynesian answer to the New Classical challenge.[3] In that debate, the term "Keynesian" has come to include a much broader set of ideas than Keynes originally expounded. Keynes set out to justify a government activist policy for affecting the aggregate economy. It is reasonable to conclude that models that do that are Keynesian.

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 Classicals who are adding ad hoc assumptions to the more general New Keynesian model. In this emerging literature New Classicals are directly engaged by New Keynesians in their own general equilibrium terms. Thus, the nomenclature issue is more than a terminological debate. It is a debate

about what currently should be the central issue at dispute between Keynesians and Classicals. My definition of New Keynesian focuses that debate on coordination problems.

My previous articles were written primarily for macroeconomic specialists who are familiar with the traditional groupings of macro thought. Hence, those articles assumed significant previous knowledge, and left many non-macrospecialists in the dark about where this New Keynesian literature differs from other Keynesian schools. In this paper I provide a simple statement for the nonspecialist of what my definition of New Keynesian economics is, why its emergence is an important development in macro theory, and what its relation to other schools of macro is.

To do so I first provide a brief summary of the key elements of various schools of macroeconomics. This summary supplies the necessary background information to place the recent use of the term, New Keynesian economics, in perspective, and to see why it is important to separate what I call New Keynesians from Neo-Keynesians. Then I expand upon the distinctive elements of what I call New Keynesian economics, trying to give a sense to the nonspecialist of what is unique in New Keynesian economics and why, although it is still in its infancy, it has the potential of reinvigorating the Keynesian view of macroeconomics.

In this paper I concentrate only on the broadest conceptual issues involved in New Keynesian economics, since the following paper nicely covers many of the details and unanswered questions. In that paper Hans van Ees and Harry Garretsen [1992] discuss some of the literature that I am including under the New Keynesian classification, and some of the historical predecessors of the New Keynesians.

THE VARIOUS MACROECONOMIC SCHOOLS

Most non-macroeconomic specialists recognize two schools of macro: Classical and Keynesian. Most also have heard about the subclassifications Neo-Classicals, New Classicals, and Neo-Keynesians, although most of those I have interviewed have been hard pressed to differentiate between a Neo-Classical and a New Classical, or a (no prefix) Keynesian and a Neo-Keynesian. Among macro specialists, at least those with a view that macroeconomics captures a substantive intellectual debate, those terms have specific meaning that captures what issues are disputed. Since the concept, New Keynesian, has meaning only in juxtaposition with these other macro schools, in order to give the non-macro specialist a sense of why the development of New Keynesian economics is important, it is necessary first to discuss the meaning of the existing terminology. What is the difference between a neo and a noprefix Keynesian or Classical, and what is the difference between a Neo-Classical and a New Classical? Chart 1 on the following page provides a brief summary.[4] As you can see, it divides the debate between Keynesians and Classicals into three separate debates, a *noprefix* debate, a *neo* debate, and a *new* debate. Let's consider these three debates individually.

THE "NO PREFIX" DEBATE

When used in juxtaposition to neo or new, the terms "Keynesian" and "Classical" (without prefixes) convey a debate that is much wider and less technical than the other debates. This use of the term, Keynesian, became part of the literature in the writing of Joan Robinson (who called the Neo-Keynesians Bastard Keynesians), Paul Davidson (who created the term Post-Keynesian to try to separate out the economics of Keynes

CHART 1
New Keynesian Economics In Perspective
Macroeconomic Schools

	No Prefix		Neo		New	
	Classical	*Keynesian*	*Classical*	*Keynesian*	*Classical*	*Keynesian*
Modeling Techniques	Informal; based on Quantity Theory and Say's Law	Informal; based on simple income expenditures model	Semiformal; focused on IS/LM model	Semiformal; focused on IS/LM model	Formal; based on general equilibrium, Say's Law, Quantity Theory, rational expectations and market clearing	Formal; based on general equilibrium with macro externalities, rational expectations and multiple equilibria
Institutional Backdrop	Informal; contextual	Informal; contextual	Semiformal; semicontextual	Semiformal, semicontextual	Noncontextual; analytic	Noncontextual, analytic; although it employed the importance of context in deciding which equilibria will be arrived at
Monetary Theory	Quantity Theory; dichotomy between real and nominal sectors	Unclear how monetary sector is integrated into real sector	Formal money market analysis with LM curve rather inelastic; Quantity Theory dichotomy broken by Pigou effect	LM curve rather elastic; dichotomy broken by Keynes effect	Quantity Theory; dichotomy between real and nominal sectors; no formal analysis of money	Money is part of production function; dichotomy inherently broken
Explanation of Unemployment	Wage rigidities	Cyclical fluctuations; shortfall of demand	Wage rigidities	Wage rigidities combined with shortfall of demand	Model precludes unemployment; wage rigidities would cause unemployment	Initial model focuses on aggregate inefficiency, not unemployment

from Neo-Keynesian economics), and Axel Leijonhufvud (who also differentiated the economics of Keynes from Neo-Keynesian economics). Through these economists' work the noprefix/neo 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 (Supply creates its own demand) and the Quantity Theory of Money (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.

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's ideas, so what is really Keynesian economics is subject to dispute.

THE "NEO" DEBATE

The historical debate between the Keynesians and the Classicals 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 Classicals, led to the adding of the "neo" prefix to both Keynesians and Classicals. 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-Classicals 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-macrospecialists think of as Keynesian or Classical economics, but to a macrospecialist, 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, Hicks's famous article, *Keynes and the Classics* [1937], 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 the Neo-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.

Because the Neo-Keynesian model requires fixed nominal wages to lead to different results from the Neo-Classical model, whereas Keynes was explicit that that assumption of fixed nominal wages was not necessary, most Keynes scholars do not regard this model as an adequate representation of Keynes's ideas. In the 1970s E. Malinvaud [1977] and Barro and Grossman [1971; 1976] extended the formality of the Neo-Keynesian model and presented Neo-Keynesian economics in a more complete general equilibrium model, but their work is still classified as Neo-Keynesian since the central Neo-Keynesian elements remain. Specifically, the central difference between their Keynesian and Classical cases is dependent on fixed nominal wages.

As I stated above, not all macroeconomists accepted the formal Neo-Keynesian interpretation of the Keynesian/Classical debate, causing many splinter groups and much confusion. For example, many monetarists, most specifically Milton Friedman, when pushed, rejected the formal Neo-Classical position, and related their arguments back to the early Classical schools. This led to Friedman's being "utterly baffled" by the views attributed to him by Neo-Keynesians [Friedman, 1974].

The Keynesian counterparts to the monetarists were the Post-Keynesians. They, like the monetarists, argued that the Neo-Keynesians had it all wrong — that it was impossible to achieve a deterministic model. Both these schools were throwbacks to the early no-prefix classifications. They wanted to broaden the macroeconomic debate from the narrow confines to which the neos had consigned it.

But these, and other, critics of the narrow "neo" debate lost out in the fight for textbook space. By the 1970s the debate between Keynesians and Classicals was seen almost exclusively in the variations of the formal models in which nominal wage flexibility played a central role. As that happened the Neo-Keynesian and Neo-Classical models were taught to students as the entire Keynesian/Classical debate. Thus, students lost sight of much of the intellectual debate, setting the stage for the next development in macroeconomic thought, in which, instead of moving back to the broader debate, the discussion shifted to the aspect of the Neo-Keynesian model that caused the Neo-Keynesian model to differ from the New Keynesian model — the assumption of nominal wage and price flexibility.

THE "NEW" DEBATE

In the early 1970s the Neo-Keynesian position of fixed nominal wages was called into question by the work done in the micro foundations of macro and by a group of writers who later became known as the New Classicals. This work argued that rational individuals would not be fooled by inflation and therefore that the Neo-Keynesian position based on wage inflexibility was not a tenable position. This simple argument undermined the Neo-Keynesian argument which required that individuals respond differently to real wage decreases caused by price rises than to real wage decreases caused by falls in nominal wages. Without that assumption wage inflexibility was not consistent with assumptions of rational expectations and market clearing. The general adoption of these latter assumptions by most macroeconomists led to the rise of the New Classical School and the demise of Neo-Keynesian economics.

New Classical macroeconomics is much more formal in its modeling techniques than Neo-Classical macroeconomics. It uses a non-contextual analytic model in which the institutional backdrop is totally contained within the equations of the model itself. Nonetheless it arrives at roughly the same ideas as the other Classical schools.

New Classical 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 freeing 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 Classicals. 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 return the debate to old "neo" debates about fixed nominal wages or prices from those responses that *broaden the debate front between Keynesians and Classicals 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 Neo-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 "neo" 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 interdependencies for which markets (collective coordinating institutions) have not developed to internalize them. These interdependencies might be expectational interdependencies or other types of interdependencies. 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 fixity 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 wage and price 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.[5]

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 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, like that of Classical economists, there is little direct analysis of issues of 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-unemployment equilibria temporarily aside *does not* end the macroeconomic debate. The novel element in New Keynesian thought is the recognition that, simply because there is no unemployment, there is no reason to believe that the 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 widget 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 equilibrium 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-prefix 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 miscoordinated 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 that 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 microfoundation to macro, so too is there a macrofoundation to micro which incorporates those 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 macrofoundations of microeconomics, 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 sunspot equilibria and self-fulfilling expectations models are key areas of New Keynesians' 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 teachable.

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 it 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 tacked 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 tacked 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 tacking on microfoundations to the existing Neo-Keynesian model; it is instead searching for the appropriate macrofoundations for microeconomics. If successful it will not only change the way economists think about macro, but will also change the way they think about micro.

NOTES

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1. Mankiw is not a strong advocate of his definition; in private correspondence to me he stated that he is now somewhat disparaging of all nomenclature issues, including his use of the term New Keynesian. In his recent paper, "The Reincarnation of Keynesian Economics" [Mankiw, 1992], he writes that "With new Keynesians looking so much like old classicals, perhaps we could conclude that the term 'Keynesian' has out-lived its usefulness."
2. I claim a certain right to discuss the meaning of the term, New Keynesian, since I was one of its originators [Colander and Koford, 1985; Colander, 1986].
3. In my view, whether this multiple equilibrium approach to macroeconomics can be found in Keynes is a side issue of only historical interest. The real issue is how best to conceive of the macroeconomic problem.
4. This table is a modification of tables in Colander [1986, 346, 370].
5. One of the problems I have with Mankiw and Romer's definition of New Keynesian economics is that the central element is wage and price flexibility and the interaction of real and nominal rigidities. Since the question of wage and price rigidities has always been part of Neo-Keynesian economics, in other papers I suggested that, at most, this work could be called New Neo-Keynesian [Colander, 1991; 1992a], but said that such subclassification strains the memory banks of even macro specialists.

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