

# WHAT IS A NICE GIRL LIKE YOU DOING IN A PLACE LIKE THIS? MACROECONOMICS AFTER FIFTY YEARS

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It has been my honor to serve as President of the Eastern Economic Association during the past year. Now is certainly the best opportunity I will ever have to offer my thanks—and yours—to those who keep the Association running and getting better. They include, first of all, the Executive Director, Bill Lott, without whom weeds would be growing here right now. I also want to pay tribute to Mahmood Zaidi, who put this excellent program together, to Ingrid Rima who edits and nurses the *Journal*, to Ray Canterbury, the next President of the Association, and to Bill Leonard, my predecessor, who were always willing to bring their experience and wisdom to bear when I needed help and advice.

My last duty—I don't know whether to think of it as a reward or a punishment—is to utter a Presidential Address. I can remember reading, when I was very young, a multi-volume work that was then thought of as a Great Book, but would now be described as pseudo-anthropology: James Gordon Frazer's *The Golden Bough*. As I remember it through the haze, Frazer purported to show, through study of myths from all periods and places, that there was a universal myth, perhaps once a description of concrete reality, according to which early societies elected or chose a young man to be a sort of symbolic King For A Year. During his year of kingship he lived in the lap of luxury, sugar-plums all day long. At the end of the year, however, he was ritually slaughtered in the belief that only by such a sacrifice could the continuing fertility of the Earth be ensured. Some pseudo-anthropologists believe that the Presidential Address is a survival of that quaint custom.

It was foreordained that our 1986 convention would take as its theme the 50th anniversary of the publication of *The General Theory of Employment, Interest and Money*. Like it or not, it has certainly been the most influential work of economics of the 20th century, and Keynes the most important economist. You have heard a lot about *The General Theory* and about Keynesian economics during the past couple of days, perhaps more than you wanted to know. That leaves me with a dilemma. I have the strong feeling that I should conform to the general theme: it is, after all, both historically important and completely contemporary. But I do not want to repeat myself or others, and that leads in the opposite direction.

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I shall adopt two devices in the attempt to create a slightly different perspective for this talk. The first is to recognize that *The General Theory* was more than the original statement of what we now call Keynesian economics. In that book Keynes also invented what we now call Macroeconomics. So I can look back not only at Keynes's own distinctive ideas but also at what has become of macroeconomics more broadly. My second stratagem is to use Pigou—as I did in another context in my American Economic Association Presidential Address—as the living example of the ideas Keynes was trying to overthrow. This is especially appropriate because what was common to Keynes and Pigou more or less constituted macroeconomics fifty years ago. (I half expect to be struck by one bolt of lightning labelled Wicksell and another labelled Kalecki. But I stand by my statement. Anyway, even if I am wrong, two strikes is not out, so I am still at the plate.)

Pigou, by the way, confirms my claim that Keynes had really invented macroeconomics. He wrote, in his Marshall Lectures of 1949: "In my original review-article on the *General Theory* I failed to grasp its significance and did not assign to Keynes the credit due for it. Nobody before him, so far as I know, had brought all the relevant factors, real and monetary at once, together in a single formal scheme, through which their interplay could be coherently investigated." That is exactly what macroeconomics is all about.

This is an important point. Before 1936 there was indeed business-cycle theory. Nobody reads that literature any more, but it is possible to get a good grasp of it—maybe better than the originals—from Gottfried Haberler's classic *Prosperity and Depression*, which was standard fare for graduate students of my vintage. Some of the stories the older writers told were interesting and some were probably even true: say Aftalion's prefiguration of the acceleration principle (1909) or Pigou's own psychological theory (1927). Some—like Hayek's overconsumption notions (1931)—I found simply unintelligible. (This was before I had any particular beliefs about macroeconomics. My mind may have been defective but it was not closed.) None of them, however, had any compelling logic. None of them produced conviction that starting from here the story would inevitably lead to there. None of them, in Pigou's words, brought all the relevant factors, real and monetary at once, together in a single formal scheme, through which their interplay could be coherently investigated. As we would say today, there was no determinate model lurking behind the story-telling. Now, with a lot of hindsight, one might be able to write down an implicit model in some cases, but I suspect the process would involve at least as much invention as translation.

After the *General Theory*, and especially after the mathematical versions of it produced by Hicks, Meade, Lange, Reddaway and others, things would never be the same; compare Metzler and Hawtrey on inventory cycles for instance, and you will see the difference in approach and tone.

So, in a significant sense the story of macroeconomics begins with the *General Theory* in 1936. In 1940, only a few years later, I took my first course in Economics at Harvard College. Nobody mentioned Keynes to us, of course, though the marvelous galaxy of graduate students of that era—Samuelson, Metzler, Musgrave and Tobin for openers—were no doubt already under the influence. In the same year, 1940, Pigou completed the Preface to *Employment and Equilibrium*, which was clearly intended to be his statement and defense of the orthodoxy that Keynes had challenged and—as Pigou thought—unfairly distorted.

*Employment and Equilibrium* is already a modern book, even more so than the *General Theory*. There is a definite, determinate macroeconomic model, stated in a small system of equations, together with a discussion in plain English. There are several variants of the model, as I shall explain, and Pigou does page after page of comparative statics on them, varying first one parameter and then another. Like a good Marshallian he lays the results out verbally at stupefying length in the twelve chapters of Part III, and summarizes them

mathematically in 20 pages of Tables that form an Appendix.

The book is harder to understand than it needed to be. One reason is that Pigou adopts some rather peculiar language: for example, the "supply function of labour for investment" is what you and I would automatically call the savings-function. He must have had some reason for his choice of words; he was a very lucid writer, after all. To a modern reader, however, the result is unnecessary obscurity. A second, and more important, difficulty is that Pigou chooses to tell his story in terms of a two-sector model, one sector producing consumer goods and the other capital goods, both sectors being imperfectly competitive. This choice has some compensating advantages. For example, it is possible to discuss the implications of different degrees of monopoly in the two sectors. The cost, however, is that the two-sector framework makes it harder to compare Pigou's story with the Keynesian model, or with what the literature has handed down to us as the standard Keynesian model.

You can do it if you try, however, and then there is a surprise; at least there was for me. Pigou's macroeconomic model—remember that he was self-consciously trying to tell the world what the "classical" macroeconomic model really was—Pigou's model is ISLM!

No doubt you are asking yourself if I am stretching a point. The answer is no, not really. One of Pigou's final equations equates intended saving and intended investment. Aggregate saving is expressed as a function of the interest rate and the level of real consumption. That seems odd; we would expect income rather than consumption. But Pigou explains himself; he has qualms about the definition of "real income" when there are two goods, and he argues that nothing hangs on this simplification. He makes investment demand a function only of the rate of interest. I will comment on that later. For now it is enough to say that this equation walks like an IS-curve, talks like an IS-curve, and sounds like an IS-curve. It is an IS-curve.

Pigou's second main equation is derived from the quantity theory of money. Like any good Cambridge soul he assumes without fuss that the income-velocity of money is an increasing function of the interest rate. For any given central-banking policy, that takes care of  $MV$ . Set  $MV$  equal to the nominal value of output and you have a perfectly serviceable LM-curve. It is pretty well disguised in Pigou's algebra because he has to build up nominal output out of the separate outputs of consumption and investment goods, the ratio of their separate prices to their separate marginal costs, and the relation of short-run marginal cost to the nominal wage. But it is all there. Apart from whatever insight comes from the two-sector structure, you would lose nothing by writing Pigou's equation as  $MV(r) = PY$  and that is just LM with a unitary income-elasticity of demand for money.

Actually Pigou carries his LM-curve a step further. There is good reason, he says, to think of  $M$  itself as endogenous, even in a closed economy. It is subject to Central Bank policy. In fact Pigou distinguishes four separate types of monetary policy. The Central Bank can let  $M$  rise or fall with the rate of interest. (He calls this "normal banking policy".) Alternatively, the Central Bank can aim to stabilize nominal income, or it can aim to stabilize the price of consumption goods (not the "price level" because that is ill-defined), or it can aim to stabilize the interest rate itself. In this scheme of things, the monetarist policy of holding the money-supply constant would be a limiting case of normal banking policy. Part of the tedium of Pigou's comparative statics is that he works things out for each of these types of monetary policy. Tedious or not, it is a good idea.

I mentioned a moment ago that Pigou's investment-demand function has the interest rate as its only argument. He considers whether aggregate output—or rather consumption—belongs there as well, and decides that it does not. His reason is actually rather Keynesian in one respect and just the reverse in another. He argues that there is no reason for forward-looking investment decisions to be much influenced by mere current events. Keynes

thought much the same thing: in normal circumstances the location of the marginal efficiency schedule is governed primarily by "the state of long-term expectations." Part of Keynes's theory of depressions, however, was that prolonged underemployment might undermine this dependence. Then a sudden collapse of long-run expectations could cause an extreme and dangerous sensitivity of the demand for investment to the currently depressed level of economic activity. That sort of vision, with its overtones of the firm confronting a sales-constrained future, was apparently not part of Pigou's mental furniture. But I think he would have been happy with a  $g$ -theory of investment if he had known about it.

In case you still have doubts, I can cite one other authority who seems to agree with my identification of Pigou's macro-model with ISLM. That is Pigou himself. I have already quoted from his reconsideration of the matter in the 1949 Marshall Lectures entitled "Keynes's *General Theory*: a Retrospective View." There he says: "When I wrote my *Employment and Equilibrium* . . . I had not read the *General Theory* for some time and did not realize how closely my systems of equations conform with the scheme of his analysis."

There is a further touch. After writing down his equations, Pigou calls attention to the fact that he is one short, if the nominal wage is taken as an unknown. Two alternative ways of determining the model suggest themselves. One is to add an equation that says the nominal wage is exogenous. That way he associates with Keynes. The other way is to append an equation that says the level of employment (the sum of employment in the consumption and investment sectors) is exogenous. Is that the "classical" view? Here are Pigou's words, "what, then, is the classical view? It is—and, as one who is supposed to hold it, I am perhaps in a better position to know than those who say that they do not—that full employment does, indeed, not always exist but always *tends* to be established. In terms of the construction with which we are here working, this means that, if the economic system were not subject to disturbances, our fourth equation would always have the form (employment) =  $Q$ . Since, in fact, there are disturbances and since money wages are in some degree sticky, this equation, as regards any short interval, is likely to have the alternative form (nominal wage) =  $T$ . But there is always a strong force making for the establishment of full employment)." I have cited here at length mainly for the pleasure of hearing Pigou quote Milton Friedman a quarter-century in advance, while at the same time, sounding a bit like a 1950s Keynesian.

Well, what are we to make of this? Was Pigou, the arch-classical economist, really a closet Keynesian, give or take a little friction in the labor market? And if Pigou was, what about all the others? Was there no Keynesian revolution after all? I am not scholar enough to give a confident answer; but I want to propose a tentative interpretation.

To begin with, it is important to remember that *Employment and Equilibrium* was explicitly written as an answer to the *General Theory*. All of a sudden, in order to do that it was necessary to talk macroeconomics, to produce a macroeconomic model, to "bring all the relevant factors, real and monetary at once, together in a single formal scheme, through which their interplay could be coherently investigated." Before the *General Theory* the classical macroeconomics was more of a muddle than a model. Dan Mitchell has documented, in a paper read at this very convention, that pre-Keynesian thinking about wages and the labor market was just an unarticulated collection of vague and often inconsistent ideas. Aggregative economics, to the extent that there was such a thing, was even more so. I have read enough memoirs of the period, and I remember my textbooks of 1940 well enough, to know that pre-Keynesian economists did not think about macroeconomic problems as if they had a version of Pigou's 1940 model in their heads. In 1933, Pigou himself, like the others, had nothing more to say about disastrously high unemployment than that unemployment occurs when real wages fail to adjust smoothly to fluctuations in demand.

The magnitude and persistence of the depression of the 1930s—Britain had been depressed since the early 1920s—made the inadequacy of this analysis plain to everyone. The fact that many orthodox economists favored countercyclical public works on common-sense grounds does not excuse the intellectual failure.

Do not misunderstand me. I am not suggesting that Pigou made up his version of "classical" economics out of whole cloth in 1940. I do think that the felt need to make an explicit response to Keynes forced Pigou, probably for the first time, to be a modern macroeconomist. It would not then be surprising that he should address the issues in Keynes's terms and with some of Keynes's organizing devices. Lesser men than Pigou no doubt remained in a muddle.

There was very likely an additional factor at work. You may have noticed that I have been carrying on so far as if ISLM and Keynesian economics are more or less the same thing. This view goes back not only to Hicks but also to Modigliani's famous version of the Keynesian system that derives its special properties from the interaction of sticky nominal wages and liquidity preference. Some modern macroeconomists—including both self-conscious Keynesians and anti-Keynesians—take a dim view of the ISLM apparatus. They regard it either as a distortion and parody of the *General Theory* or as mere fix-price nonsense. I am not among them, not at all. But of course there *was* more to the *General Theory* than the building-blocks of ISLM, and it is important to keep that in mind in understanding Pigou's attitude to Keynesian macroeconomics.

To take only the most shocking example, Keynes claimed to have shown that a modern capitalist economy could be at rest in a state of underemployment equilibrium. Pigou obviously could not accept that, and did not. I do not know whether Keynes merely intended to stir up the animals and get their attention, or whether he thought he had done more. There is certainly nothing in the *General Theory* itself that would constitute a rigorous argument of that case by modern standards. My guess is that Keynes was on to the fundamental notion that a developed capitalist economy is intrinsically given to what we might now call trading externalities. I could profitably produce and sell more if each of you were producing more; each of you could profitably produce and sell more if only I and all the others were producing more. In the absence of a recontracting auctioneer, however, there is no way we can arrange to have this good thing happen. Meanwhile there can be many equilibria, including bad ones.

The particular source of paradox that Keynes had most in mind operated through saving and investment. It arose from the fact that, while an act of current saving may promise extra expenditure on some unspecified commodity at some unspecified future date, an act of current investment involves a large bet on a specific commodity and a specific date. The uncertainty thus created—Keynes was quite explicit about this—was not, to his mind, the sort of probabilistic uncertainty that could be diversified away. It was true Knightian uncertainty. So some sort of cooperative or collective action was the only way to internalize the externality. Today, when the notion of multiple inefficient Nash equilibria in non-cooperative games is a commonplace of analysis, this sort of notion can be made rigorous. Some of the more sensible modern macroeconomists are doing just that. It is easy to see why, fifty years ago, it must have seemed like dangerous moonshine to Pigou, and more so to lesser men.

I can not try now to give you a potted history of macroeconomic thought since its birth fifty years ago. The story is pretty familiar anyway: the more or less Keynesian consensus of the 1950s and 1960s, the Monetarist interregnum in the stagflation of the 1970s, the New-Classical wave of the late 1970s and early 1980s, up to whatever is about to happen now. Instead I want to skip immediately to the current state of affairs in macroeconomic theory. Personally I find it rather depressing, unworthy of its tradition of liveliness and relevance.

they ask their teachers point-blank how they think about practical macroeconomics, when no one is watching, so to speak, the answer usually appears to be: some sort of dynamic ISLM model, fitted with a supply side featuring a lot of lags and frictions. But what the same teachers teach is a series of formal equilibrium exercises that start with intertemporal optimization, do a number of elegant and fascinating tricks, and go more or less nowhere. There appears to be, within macroeconomics, the sort of dichotomy that Walter Bagelot described a century ago in the British system of government: between the effective part and the ceremonial part; between one part that works and the part that is there for show. Maybe that was a good thing in a government, but it does not seem like a useful way to do or teach macroeconomic theory.

Of course, it remains to be seen whether a modified and improved ISLM is actually useful. A practical model is not much good if it is, in practice, wrong. I remarked earlier that one of the reasons for the breakdown of the post-war Keynesian consensus was its apparent inability to provide a quick satisfactory analysis of the stagflation following the first OPEC oil-shock. That failure was soon repaired. The most popular intermediate macro-texts now do a fine job of it. Too late: the tide had turned. If a modern Keynesianism makes a comeback, it would be nice if it had learned something from the experience of defeat. That is why I think there is no more important activity for an economist today than the careful and realistic modelling of imperfect markets with price-setting firms. (By the way, Frank Hahn and I have some tentative results that prepare the ground. They show that perfect wage and price flexibility can be a seriously de-stabilizing property in an aggregated economy, and for precisely the reasons suggested by Keynes in Chapter 19 of the *General Theory*. Maybe it is a sign of the times that Peter Howitt's paper at this convention makes the same point in terms of a quite different model.)

Well, then, to return to the cliché question of my title: What *is* a nice girl like macroeconomics doing in a low-down place like this? I will answer using a much more recent cliché: just hanging out, but it might turn out to be a learning experience.