Prepared Statement

Robert Solow Professor Emeritus, MIT

House Committee on Science and Technology Subcommittee on Investigations and Oversight

"Building a Science of Economics for the Real World"

July 20, 2010

It must be unusual for this Committee, or any Congressional Committee, to hold a hearing that is directed primarily at an analytical question. In this case, the question is about macroeconomics, the study of the growth and fluctuations of the broad national aggregates – national income, employment, the price level, and others – that are basic to our country's standard of living. How are these fundamental aggregates determined, and how should we think about them? While these are tough analytical questions, it is clear that the answers have a direct bearing on the most important issues of public policy.

It may be unusual for the Committee to focus on so abstract a question, but it is certainly natural and urgent. Here we are, still near the bottom of a deep and prolonged recession, with the immediate future uncertain, desperately short of jobs, and the approach to macroeconomics that dominates serious thinking, certainly in our elite universities and in many central banks and other influential policy circles, seems to have absolutely nothing to say about the problem. Not only does it offer no guidance or insight, it really seems to have nothing useful to say. My goal in the next few minutes is to try to explain why it has failed and is bound to fail.

Before I go on, there is something preliminary that I want to make clear. I am generally a quite traditional mainstream economist. I think that the body of economic analysis that we have piled up and teach to our students is pretty good; there is no need to overturn it in any wholesale way, and no acceptable suggestion for doing so. It goes without saying that there are important gaps in our understanding of the economy, and there are plenty of things we think we know that aren't true. That is almost inevitable. The national – not to mention the world – economy is unbelievably complicated, and its nature is usually changing underneath us. So there is no chance

that anyone will ever get it quite right, once and for all. Economic theory is always and inevitably too simple; that can not be helped. But it is all the more important to keep pointing out foolishness wherever it appears. Especially when it comes to matters as important as macroeconomics, a mainstream economist like me insists that every proposition must pass the smell test: does this really make sense? I do not think that the currently popular DSGE models pass the smell test. They take it for granted that the whole economy can be thought about as if it were a single, consistent person or dynasty carrying out a rationally designed, long-term plan, occasionally disturbed by unexpected shocks, but adapting to them in a rational, consistent way. I do not think that this picture passes the smell test. The protagonists of this idea make a claim to respectability by asserting that it is founded on what we know about microeconomic behavior, but I think that this claim is generally phony. The advocates no doubt believe what they say, but they seem to have stopped sniffing or to have lost their sense of smell altogether.

This is hard to explain, but I will try. Most economists are willing to believe that most individual "agents" – consumers investors, borrowers, lenders, workers, employers – make their decisions so as to do the best that they can for themselves, given their possibilities and their information. Clearly they do not always behave in this rational way, and systematic deviations are well worth studying. But this is not a bad first approximation in many cases. The DSGE school populates its simplified economy – remember that all economics is about simplified economies just as biology is about simplified cells – with exactly <u>one</u> single combination worker-owner-consumer-everything-else who plans ahead carefully and lives forever. One important consequence of this "representative agent" assumption is that there are no conflicts of interest, no incompatible expectations, no deceptions.

This all-purpose decision-maker essentially runs the economy according to its own preferences. Not directly, of course: the economy has to operate through generally well-behaved markets and prices. Under pressure from skeptics and from the need to deal with actual data, DSGE modellers have worked hard to allow for various market frictions and imperfections like rigid prices and wages, asymmetries of information, time lags, and so on. This is all to the good. But the basic story always treats the whole economy as if it were like a person, trying consciously and rationally to do the best it can on behalf of the representative agent, given its circumstances. This can not be an adequate description of a national economy, which is pretty conspicuously <u>not</u> pursuing a consistent goal. A thoughtful person, faced with the thought that economic policy was being pursued on this basis, might reasonably wonder what planet he or she is on.

An obvious example is that the DSGE story has no real room for unemployment of the kind we see most of the time, and especially now: unemployment that is pure waste. There are competent workers, willing to work at the prevailing wage or even a bit less, but the potential job is stymied by a market failure. The economy is unable to organize a win-win situation that is

apparently there for the taking. This sort of outcome is incompatible with the notion that the economy is in rational pursuit of an intelligible goal. The only way that DSGE and related models can cope with unemployment is to make it somehow voluntary, a choice of current leisure or a desire to retain some kind of flexibility for the future or something like that. But this is exactly the sort of explanation that does not pass the smell test.

Working out a story like this is not just an intellectual game, though no doubt it is a bit of that too. To the extent that the observed economy is actually doing the best it can, given the circumstances, it is already adapting <u>optimally</u> to whatever expected or unexpected disturbances come along. It can not do better. It follows that conscious public policy can only make things worse. If the government has better information than the representative agent has, then all it has to do is to make that information public. If prices are imperfectly flexible, then the government can make them more flexible by attacking monopolies and weakening unions. Actually this proposition is dubious on its own.

The point I am making is that the DSGE model has nothing useful to say about antirecession policy because it has built into its essentially implausible assumptions the "conclusion" that there is nothing for macroeconomic policy to do. I think we have just seen how untrue this is for an economy attached to a highly-leveraged, weakly-regulated financial system. But I think it was just as visibly false in earlier recessions (and in episodes of inflationary overheating) that followed quite different patterns. There are other traditions with better ways to do macroeconomics.

One can find other, more narrowly statistical, reasons for believing that the DSGE approach is not a good way to understand macroeconomic behavior, but this is not the time to go into them. An interesting question remains as to why the macroeconomics profession led itself down this particular garden path. Perhaps we can come to that later.