Victor Zarnowitz

If Paul Samuelson is the "Father of Modern Economics," then Victor Zarnowitz easily holds the title of "Mr. Business Cycle." In the recent book *Business Cycles and Depressions: An Encyclopedia*, Victor Zarnowitz is the author of the chapter that surveys the field of business cycle research, Q.E.D. No other economist in recent times has done more to sharpen and deepen our understanding of the character of economic fluctuations than Victor Zarnowitz.

Professor Zarnowitz received his Ph.D., summa cum laude, from the University of Heidelberg in 1952. He has been a researcher for the NBER, was a member of the faculty at the University of Chicago from 1959-89, is a fellow of the American Statistical Association, and currently is a Senior Fellow at The Conference Board. We spoke in New York in December 1997.

I went into the interview pretty much like I did all others. Professor Zarnowitz indicated he enjoyed the time we spent together and thanked me for being well prepared. I left his office feeling somewhat "blown away" if you'll forgive the colloquial term. I'm humbled every time I read the interview that follows. The world would be worse off without Victor Zarnowitz and thinking of him reminds me to be thankful for the many blessings that have been given to me and my family.

Would you please give us a brief run down of when and where you were born and what you were doing during the Great Depression?
I was born on Nov. 3, 1919 in a little town named Łańcut in southern Poland. It was part of the Austro-Hungarian monarchy before World War I. After World War I, there was independent Poland, and I was a teenager during the Great Depression. As I recall it, I was not so terribly affected by it because we were in modest but pretty good circumstances. My father died when I was ten, in 1929. He was a teacher in a *gymnasium*, a high school, which was more like lower college here. He taught Greek, Latin, and German. He left a little money to my mother and to us and we moved west to a place called Oświecim, better known as Auschwitz where we built a small house. An infamous place today, but at that time it was just a small town like many others. I studied law and economics (economics was a part of law) in Cracow at the Jagellonian University in 1937-39, after graduating from gymnasium in Oświecim.

Now, coming back to the Great Depression, that hit Poland, as I know

now, pretty badly. But we had a pension and some inheritance that my father left the family. I remember that I was tutoring throughout my upper classes in gymnasium and in college, so it helped out. I was a pretty good student with a lot of emphasis on languages, history and so on, not so much on math and economics until much later.

Poland was at that time a poor country, not well organized, the economy was half capitalistic and half just backward. You could see it very clearly in the countryside in particular. And also there was a lot of poverty among the towns people - both Polish and Jewish, and the town was half Jewish. So the situation was not good. Nevertheless, Poland was better off than it was after the Communist rule, there is no doubt about it. It was almost certainly ahead of, say, Korea and right behind Czechoslovakia for example, which was probably the most advanced country in this part of Europe and the most democratic country. But instead of being ahead of such countries, as Korea or some of the poorer ones in Western Europe, now Poland is well behind in the standard of living.

How old were you when you moved from Auschwitz?
My first ten years were spent in Lańcut and my second ten years in Auschwitz and Cracow. When the war broke out, I fled and found myself, eventually, in Russian labor camps where I spent 19 months. My brother died there. I avoided the Nazis in Poland, but my family was essentially destroyed there during the war.

Where did you go to graduate school?
I went to what was called gymnasium, which was set up for eight years at the time. You went at age 10 and left at the age of 18 after taking the *matura* exam. This was a tough exam which was a precondition for getting into the university. The last two years of gymnasium were equivalent, I think, to college studies here.

You spent the better part of your career at the University of Chicago, correct?
Yes, at two places, the University of Chicago and the National Bureau of Economic Research. My wife Lena and I came back from Russia in 1946. (We married in that year in Kazakhstan, Central Asia, and later were able to make a long, slow trip back to the West. Now we have two sons and three grandchildren). In 1947-51, I studied economics in Heidelberg, the first German university to open after the war, and earned a Ph.D. there. Because of legislation I could not immediately immigrate to the United States until the McCarran Act was repealed by the Congress. I did not spend the war in Poland or in Germany or in a Nazi concentration camp. I spent it in Russia. Those

people who came back from there were restricted from immigration by the Act. After it was revoked by Congress, I came to this country in January 1952. Six weeks later I had a job at the NBER. It was a modest job as a research assistant but I enjoyed it a great deal and I learned a great deal. In 1953-54, I went away for a year to Harvard on a Social Science Research Fellowship. I had a lot to learn. I wrote my first paper in Leontief's seminar on input-output, which was published in *The Review of Economic Studies*. That helped and I came back to the NBER, which meanwhile moved from Columbus Circle to Madison Ave. and 39th street. And there I spent a few more years. In 1959 I moved to Chicago at the invitation that was promoted mainly by George Stigler.

Did you have any contact with Burns and Mitchell?
Oh yes with Burns, not with Mitchell. Mitchell was dead already. But I worked with Burns a lot and mainly with Moore; also with Ruth Mack, Mincer and Fabricant. To a lesser extent, I had contact with others like Stigler, Friedman, and Kuznets.

You have said that "Post war fluctuations have moderated because of profound structural, institutional and policy changes." What role did the Great Depression play in bringing those changes about?
A very large, even commanding role. For example, changes in banking, bank deposit insurance, that was all a legacy of the Great Depression. It was very important, I believe, for just about the first half of the post-WWII period, which was the best part of the story. It probably prevented some bad features of the interwar period. We had an earlier period with recurrent bank panics, and the more recent financial crunches are much milder. All of that, I think, was due to the Great Depression. Well, the reforms that I mentioned had some positive and some adverse effects, too, but the former prevailed, since I assume that the avoidance of any depression during the post war period was due in part to these reforms.

Did policy makers come out of the Depression smarter?
It is hard to say and impossible to answer in a simple way because they may be facing new challenges for which they are not necessarily very well prepared. But I believe the partial answer is yes. They probably learned something that helped us prevent another Great Depression. The fact is that such depressions have not occurred in the form that they have in the past. However, Europe with its high unemployment and related recent troubles recalls some of the past depressions. One example of ideas that were corrected is that business cycles are strictly a real or nonmonetary phenomenon; this is obviously negated by

many of the facts that we observe today.

No doubt about it. Was the Great Depression mainly the result of a series of random shocks or was the downtown mainly endogenous?
I think that a downturn is almost always a combination of the two. The shocks are always with us. But I think that they are not the factors on which we should concentrate as much as recent literature does. I think that this is a misconception and actually it is not an economic explanation of fluctuations, and that is the worst part of it. If we have only fragments and each episode is standing on its own due to some kind of one or more, typically more, shocks of various kinds then we do not advance very much in our explanation of business cycles. It is the endogenous part that calls for explanation, for understanding, more than the exogenous part. The exogenous part, the shocks as I say, are always around. But it is important to know why the economy has different sensitivities over time to these shocks. Why, for example, at certain times these shocks occur and they do not cause a recession or depression, and at other times they do.

Maybe the propagation mechanism is more important to understand?
I think the propagation mechanism is very important. But the whole concept of shocks plus propagation, while today the leading kind of "explanation" of business cycles, is not in my opinion the right way to do it. Actually, more promising seems the way of the old students of the business cycle, such as Mitchell. He understood perfectly well that business cycles are basically a set of endogenous phenomena that are aggravated by various external shocks (or alleviated since some shocks are positive). He studied the data as a long, long prelude to constructing a theory which he never succeeded in completing. But he had the right approach, in my opinion, to study business cycles empirically and helped to derive important elements of theory, notably the role of profits, investment, and credit. (PS: My recent article in the *Journal of Economic Perspective*s follows this line of historical and theoretical research.)

You do not think that all business cycles are alike, isn't that correct?
No, I don't.

So, do you see the Great Depression as of a different character altogether, or does it properly fit the 20th century mold?
I think that it was clearly in some ways unique in its length and depth and spread. We have had depressions of various kinds in this country, and in other countries. The 1930s were presumably the worst, but it was not something that

was absolutely unique, and it was not the case that there were no predecessors in any sense and no successors in any sense, as some people say. Christina Romer says that the Depression was something unique that has never been before and will never be again. I don't know that I paraphrase her absolutely correctly, but that's the sense I get from reading Romer. I would not subscribe to that view. The Great Depression had its own unique features, there is no doubt about it, but so had many other episodes.

You can always find historical particularities, the story never repeats itself exactly.

But I would not stress those. The important things are - precisely what is in common to many business cycles? For example, the concurrence of declines in profoundly cyclical variables - actual and expected profits, credit, money, plus inventory and fixed investment - was clearly often the main source of trouble. Inventory investment in lighter cycles and fixed investment proportionately more in big cycles. This repeats itself in every cycle including the Great Depression. The interaction among these variables is the most important part of the cycle, it seems to me. So this is not accidental, this needs to be studied as it has been studied intensively by a great many economists. What I am saying is that we should return to that instead of seeking explanations in thinking that it will always be unique causes, like particular technological innovations, that account for business cycles. This factor is probably more important in longer waves but does not furnish as much of an explanation of business cycles as the variables I just mentioned.

So then, qualitatively, can we say that you think the Depression was like other 20th century cycles?
No, because the post-Depression cycles did not have what the Great Depression had, so I would not say that they are in the same family of cycles. But the Great Depression was not the first depression. In the 19th century and early 20th century there were several important depressions. For example, the downswings of 1907 and 1921 were short but very severe and deflationary. These contractions had much more in common with the Great Depression of the 1930s than have the post-WWII recessions. (Postscript: The late 1990s produced depression-like developments in Japan and the Asian 'tigers'.)

Did you have a good idea at the time of what the postwar economy was going to shape up like?
I can't claim that I did, and at my age then should not be expected to. I think that few people, even very great economists, could see it very clearly. In fact some very excellent economists missed the Great Depression altogether, at

least in the early stages. As is well known, Irving Fisher and others did not recognize it as a deep and disastrous event until much later. Then they had much to contribute, for example Fisher had developed the debt deflation theory. But they were very wrong initially, and it is a well-documented fact that Fisher lost a lot of money in the process. So he can be claimed rightly as one of the greatest American economists, but he certainly was not a great forecaster or prophet. Keynes was better at portfolio management, but there also is no evidence that he foresaw the Great Depression, as far as I know.

Do you think monocausal explorations of the Great Depression get very far?
No, I don't. It is troublesome, but true, that the Great Depression is still not very well explained despite an enormous amount of work that has been done on it. Some explanations, for example, stressing the stock market are off the mark because the downturn did not start with the stock market. The market collapse was partly a reflection of what was going on, more than a source, but this does not say much. And then the controversy about whether it was consumption or construction or still another part of output, which started the downward spiral, that also did not get very far. It may have been both consumption and investment, and it certainly soon came to involve all of that. At various times different sectors had different impacts. There were outside errors of course, errors in policy and errors in the private sector as well. The Austrians and Swedes had much to contribute with their various overinvestment theories. And then there is a revival of underconsumption as well.

Do you think, as Ben Bernanke has said, that modern business cycle models need to explain both the post - WWII and the interwar eras and we should not have to have two different sets of models to explain both?
I agree with that, in principle. A fully satisfactory model will have to explain all kinds of episodes. There is no single model, to my knowledge, that does that right now. I think that what we need is a kind of synthesis of the theoretical and econometric models. Historical studies, leading indicators, all of these things are complementary rather than competitive, and should be viewed in this light. I called for this synthesis in my *Journal of Economic Literature* survey of business cycle theories, and I still think that this is the right way to go. But since multi-causal explanations are called for and since I also believe that different factors will play different roles in the different episodes, the same factors that I already mentioned, profits, investment, and money will reappear but with different weights. The weights will differ over time and across countries.

That is kind of a tough standard to present for any model isn't it?
Very, very tough. I am afraid that we are not yet there, we simply do not have the capability to explain it all with a single model. But, in principle yes, such a model is precisely what is needed.

You have said, "Business cycles are not mere transitory deviations from long-term growth trends."
They are not.

Is output mean reverting, and was it mean reverting during the Great Depression?
Well, it was mean reverting in a very weak sense. Normally, say, in the post-war period, it is true that deviations in the downward direction will be followed by a process of re-approaching an upward moving equilibrium. The plucking model of Friedman has something to recommend itself. If you pluck a string, it vibrates and comes back to you. So if you pluck it from below, it springs upward. And it is a fact that after a big deviation downward that is a severe recession or depression, you will often have a strong rebound, that is to say a strong recovery and expansion. Whereas the opposite is not true: an expansion could be strong or mild and it could be followed by a mild or severe recession. There is no clear correlation between the amplitude of expansion and the amplitude of the following recession, but there is much more correlation between the amplitude of a recession and the amplitude of the following expansion.

Asymmetric behavior of the business cycle?
Oh yes. It is definitely asymmetric and, I believe, essentially nonlinear.

Do you think like Nelson and Plosser (1982), and Beaudry and Koop (1993) that there is a permanent component to the recessionary behavior of the business cycle?
Yes, I think that there is probably something right about it, and that this work on the mix between transitory and permanent components is revealing something true. Business cycles are not mere transitory short-term effects without any longer term effects. They can affect the growth trend. And vice versa, it is also true that growth affects business cycles. There is no doubt that the Great Depression had strong long-term effects.

What parallels do you see between the recession of 1921 and the Great

Depression? Do you think policy makes at the time figured that the Great Depression would be a repeat of the successful deflation that they had and so didn't attempt to vigorously fight the Depression? Do you think that holds any water?
Perhaps it does, but I would not emphasize this so much. I see little evidence that the 1920-21 contraction and the whole deflationary decade of the 1920s produced many real economic successes. I don't think that the onset of the Great Depression can be mainly attributed to errors of policy.

You don't think that?
No, I do not. I think policy errors probably contributed much to the later worsening of the situation, but it is not easy to imagine that politicians could take the right steps in time to avert the downturn. The old Monetarist idea was to emphasize the money supply and to show that the Depression was essentially a matter of monetary policy. I don't subscribe to that. I see very important endogenous elements in the money supply.

Paul Samuelson has said that is unfair and hindsight to say that the Fed should have increased the monetary base by whatever was necessary to avert the Depression.
That is true. It is very easy to be wise so long after the event. We know all about it. We do not understand fully what caused the Great Depression, but we certainly know the events that happened rather well. So we know a lot that these guys in 1929-30 did not know and could not have known. On the other hand, it is also true that Friedman and Schwartz have shown that this was not the first episode of this kind, so there should have been some learning process involved. The learning process is very slow, two steps forward and one back at the best. Recently, so many people at the Fed have almost forgotten all the troubles that the Fed has caused time and again in the past. They think that what has happened in the last few years is somehow decisive. I am very skeptical about that.

Then let me ask you a related question. Do you agree that the Fed should act as an arbiter of security prices?
No, I don't. I think that is a misplaced role that gives them too much power. However, they should not close their eyes to the fact that occasionally we have money creation that leaks mainly into the market, so that there is little inflation in goods and services but a lot of inflation in security prices. They ought to be aware of it, and study it. But I would not give them a regulatory role in securities markets which anyway is already in existence and given to other

authorities. I am all for cooperation between the authorities, but not for centralization of all power in the Fed's or anybody else's hands.

What explanations do you find most compelling and think do the best job accounting for the Great Depression? What in your judgment was the initial impetus and what accounts for the protracted depth to which the economy plunged?
Well the depth, let me put in this order because it is easier. There, the policy mistakes and what happened with the Smoot-Hawley Act, the beggar-thy-neighbor policies which were unopposed and ill-conceived as such, all of that was bad and contributed to the length and severity of the Depression. Events in the foreign trade area, events in monetary policy, of course. It was wrong to place the maintenance of the gold standard ahead of a stabilizing, countercyclical monetary policy. But none of this caused the Great Depression. What was the original set of factors? That is still not clear and you can see the divergence of opinion in the literature. That in itself is evidence that we don't fully understand what happened. I think we had a decade in the 1920s, with its deflation, with its troubles in agriculture and construction, that prepared the way to the downturn in 1929. But it is certainly true that the downturn need not have led to such a disaster. So on how to precisely apportion the blame, so to speak, between the various sectors of the economy, I must pass. I'm not prepared to explain it and it is a matter for much additional study, even now. It should be possible to reach a better conclusion than we have. I think what is preventing us from a better consensus on these matters is a lot of pure assumptions and simple ideology. This is not conducive to good objective research.

Did the Depression change the psychology of the country?
Oh yes. For example, without the Depression we would most likely not have as much government interference as we have had in our economic affairs, some of it good, some of it bad. Some of the New Deal-style legislation and reforms were prompted by the Great Depression directly. So the Great Depression had a profound impact on economic policy and economic ideas and the thinking of people in general. It also had much to do with purely political but very important developments, such as the rise of the left in intellectual circles and other places both here in the U.S. and to a much larger extent in Europe.
How did the Great Depression shape your life professionally? Was the Depression the biggest single event the shaped you professionally or has something else occurred in our history that had a bigger impact?
Well personally, the biggest impact, no doubt, on me was what happened in the

1930s. Not so much the Great Depression, but the rise of fascism and national socialism in Europe and the persecution the Nazis unleashed all across Europe. Being Jewish, I was their direct target and intended victim. On the other hand, I also realize that the rise of Nazis itself was due, in part, to the Great Depression and to earlier events, especially the great inflation in Germany. The economic histories of Europe, especially Germany, and the United States, are enormously important for what happened later. The interwar period was a disaster in an economic and in a political sense. It was a global, enormous and I hope unique catastrophe. You cannot abstract from economics as most people do. It is not just plainly a moral issue, although it is that as well. What happened was a mixture of various political as well as economic factors. It is one chain that indeed goes all the way back to the Franco-Prussian war of the 1870s and the defeat of Germany in the First World War that led to the Second World War.

Would you place the blame for WWII on the Great Depression's doorstep?
No, I would not, that goes again too far. It was not the single cause. But no doubt the Great Depression played a major role and so, as I already said, did other events, the great inflation and the 1920s in general, a very miserable period in Germany.

The Treaty of Versailles and the whole thing.
Right, all of that is well understood. Now, none of that explains why Hitler came to power and why the excesses and atrocities followed. That is not fully explained. One must not abstract from things that reveal human nature at its worst; that is how it is.

Do you think one of Keynes's objectives was to save capitalism or save capitalism from itself?
I think so. It may have been misguided (*chuckling*), but that was his objective, yes. He certainly did not see much merit in socialism, as far as I know. He was bored to death by reading Marx. I understood some of my friends say the same thing about Keynes. Bob Lucas, he does not think much about Keynes, as you know, and says he ever understood him.

I told that story to Leontief and he laughed and said, "He's right. I still don't understand it."
Leontief was one of the best critics of Keynes. *The General Theory* is not very well written. It proved to be very important but it is not clear.

Is Keynes dead?
No, he is not. Neither is Mitchell and neither is Schumpeter and a number of many other great economists. They are not "dead" for they continue to be very influential.

What about as far as practical policy making is concerned?
I think many economists overreach, by thinking that they can shape policy and that they can foresee events that will shape policy. That has been found to be wrong, so far. But one can do very important things in economics without accomplishing all of that. I think we are much better in simply trying to understand the economy, its interactions and dynamics. To affect policy is not yet the first line of our business. We claim too much if we think that we can indeed act very well as policy advisors. A very large part why we cannot is that we are so poor as forecasters.

What ended the Great Depression?
World War II ended it. There was a relapse in 1937-38 that was short but very bad, coming as it did at the end of a long and incomplete expansion. At the end of 1937 we still were not, in many ways, where we were in 1929. That was unique. Usually it is in a year or two that a recovery is completed, that is, the previous peak is regained and the next growth phase begins. Here we had a period from 1929 to 1937 and a recovery had not been accomplished. The disaster ended very slowly and with another setback. Finally, the impetus that brought us out of the Great Depression was World War II.

What impact did the New Deal programs have on your thinking?
Well, I'm not an activist for I feel we are not particularly qualified for that yet. We are better qualified than most people who are non-economists, but we have not reached the stage in which we can confidently shape policy and believe, that we can avoid recessions. There are strong forces out in the economy and abroad that are difficult to deal with. But, of course, in principle we want to move in this direction, to become efficient policy advisors and forecasters. I believe that this is really the proof of the pudding. We will not really be valued until we prove to be better at forecasting and policy advice given to elected officials.

What is your view on the role of the gold standard in the international transmission mechanism of the Depression?
Recent work by Eichengreen and others shows well the importance of the gold standard in this regard, I believe.

What are some of the lessons of the Great Depression that seem to be forgotten today or that have to be continually relearned?
One lesson that is very important is that not all elements of the Great Depression are a matter of the past that will never come back. In his most recent interview in *Fortune* magazine, Friedman says that he sees no reason to change anything in his statement of several years ago where he said that the Depression will never reoccur. I agree that it will certainly not reoccur the way it did in the 1930s, but serious troubles can and are likely to happen in different forms. The high unemployment in Europe is a very serious matter: although quite different from the Great Depression, it is still very bad.

Does the memory of the Depression stay with you and have an impact on your thinking?
I can't claim that I go to bed and that I wake up with thoughts of the Great Depression. Almost every day makes me think of what happened in Europe during WWII and this is not true of the Great Depression, but that is personal. As I have said before, there is a chain of events from the Great Depression to these disasters and war-time events and that should not be forgotten either.

But the chain of events, you keep going back to it.
I keep going back to it. It is very important generally and to me personally as well.

Here is a silly question.
OK.

What would you have done to prevent it from happening if you knew then what you know now?
Well, I don't know that I would be able to do anything to prevent the downturn from happening. But I think I would have some knowledge on what to do and what not to do. The what not to do was the most important thing at the time. We now do know much about what to do to avoid a repetition of the Great Depression as it happened in those times. An overly restrictive monetary policy for example. That does not mean that I believe it's time to forget about all and any depressions that might come. They come in different forms. They have in the past and may in the future.

Robert Lucas has said that the Friedman-Phelps rational expectations school

just had plain dumb luck that the 1970s came along when it did because "most samples can not tell you which of the stories about the Phillips curve is the best one." What is your reaction to that?
I never put much stock in the Phillips curve. It was pretty clear from the 1970s on that it's shaky as an empirical regularity. There were all kinds of ways, some more successful than others but none fully successful, to "fudge" it up. Lucas is probably right, in principle. They were lucky in that the word spread and was widely acknowledged in the economics profession; personally I think, much too fast and much too much. Moreover, I'm skeptical of rational expectations as such. In studying forecasting, I see that there is a lot of bias in actual economic forecasts which should not be there if rational expectations were to apply 100% seriously.

And the empirical evidence for it is also shaky.
Very shaky.

Is the Phillips curve dead?
Well, its original formulation, yes. But it is capable of being re-formulated and has reinvented itself time and time again in the past (*chuckling*). I would not pronounce it as absolutely dead and buried. It is not a very exploitable relationship and certainly not policy-exploitable. The Phillips curve is not dead if you admit all of its reincarnations for better or for worse, and I believe largely for worse. Nothing is pretty much dead in economics. A good science ought to bring about the death of certain relationships that are proven to be empirically unsound. But in economics it is so difficult to prove or disprove certain things. They live the cat's nine lives (*chuckling*).

How do you explain the behavior of real wages in the Great Depression?
Again, that is something that is not consistent, clearly, with a simple view of the economy as fully competitive with fully flexible prices and wages. All of these axioms are not really that at all. You cannot build an empirically successful macro model on these assumptions, and you should not try.

What is your take on the apparent stabilization of the business cycle and the work of Christina Romer?
I think that the idea that there is no moderation and perhaps no difference at all in the business cycle after WWII is wrong. There has been some

moderation and there is a difference. Pre-WWI we had a number of depressions which we did not have in the U.S. after WWII. That has been enough for me to say there has been an important change over time. But recessions became again more frequent and more severe in large parts of the world since the 1970s when compared with the earlier part of the postwar period. And recent developments in Europe's high unemployment and East Asia's severe contractions have something in common with past depressions.

What is your take on the recent literature regarding whether prices are procyclical or countercyclical?

No, they are not countercyclical. I think this is a mis-measurement. When you measure inflation and business cycles properly, you find that inflation is lagging and procyclical, and so it has remained. There are some exceptions here as there are on virtually anything. An exception that is very important is the 1970s, the inflationary recessions of that decade. These were to a large extent a matter of oil price hikes. Here you had cases of countercyclical price behavior, indeed. There was not just inflation, but increased inflation during these recessions of the 1970s. But that's about it. That is not the decisive story over time. The prevailing pattern is procyclical prices that are lagging.

Could you comment on recent Fed behavior?

I think the Fed was successful partly because of luck and partly because of good management. But that is a short-run story not a long-run story. For example, all this stress on how long and how great this expansion was misses the fact that the first two or three years of this expansion were exceptionally sluggish. Recovery was disappointingly slow in 1991-92. Unemployment was still increasing, employment was stagnant. This was very different from typical cycles where the recovery is the time of the highest growth rates. So the good times started only in 1993. Slowly 1994 led to premature fears of inflation and the moves of the Fed against the inflation which turned out to be alright but could have been bad as well. Over time, if they are repeated, they may prove adverse. Anyway, 1995 was another slowdown. The years 1996 and 1997 are very, very good years in all respects, no doubt about it. Low inflation, low unemployment, everything is just fine, but people forget that these are just two or three years. (P.S: 1998 and 1999 proved highly prosperous overall as well.)

Is price stability the right focus for the Fed in your mind?

Well in some ways, yes, because they can do more about it than about other things. But somebody, presumably the Treasury should take care of fiscal policy as well; it is not something to be forgotten or written off. The elimination of federal deficits, with its presumed downward effects on interest rates, has clearly been a welcome success in which Treasury and Congress both share.

Has there been a shift in paradigm that Alan Greenspan keeps talking about that makes price stability and full employment compatible now?
There have been changes. Probably there is more technological progress than is shown in our statistics.

Because of productivity being mis-measured and slippery?
Yes, it is very difficult to measure productivity, particularly in services. We don't quite know what the advances in productivity in services have been. We don't fully know how the computer works, it is not yet like the car where everybody knows how to use it, far from it. That is probably part of the story why it does not show up so strongly in the statistics. It is simply too early to tell and we know too little about it.

And a large part is going to be unmeasurable.
That's right.

Do you think that fiscal policy should be used for growth and not for stabilization purposes?
It should be used for stabilization purposes, to the extent it can. But the results have been very disappointing in the past, both because of errors and policy ideology. But people who blame Keynes or Keynesians for that are not entirely right. Keynes certainly did not advocate deficits in expansions, only in recessions. But, there is no doubt that some Keynesians and post-Keynesians went simply astray.

Are you bothered by the trend in the distribution of income?
Yes I am, to the extent that it is valid and true. But it is a measurement problem again.

Do you know what to do about income distribution?
It is hard to tell. I am very uneasy about it. I am uneasy with forgetting about it and thinking it will take care of itself.

Leontief alerted me to some good thinking. He said this is where anthropology and sociology and economics need to come together because you are not going to find the answer to this just from economics.
I agree with that.

Are income distribution and poverty the same topic, or can they rightly be viewed separately?
No, poverty is the main thing. Even without poverty, inequalities in income distribution create resentment which has adverse effects, it makes people uncomfortable. So the distribution problem remains, even if somehow one could say that poverty is taken care of. Of course, one cannot say that anywhere, including the U.S.

But poverty is the bigger issue though.
Poverty is the bigger issue.

Are there any alternatives to capitalism?
Well, the only feasible alternative is more or less of what we have, namely, some mixture of capitalism and government interventions. It is still a mixed economy, although the mixture itself is shifting and I think it is shifting toward the market and away from the government sector. So it is not pure capitalism that we have, and some sort of "corrections" are probably unavoidable. I don't believe, for example, that people will voluntarily take care of the poorest of the poor by voluntary contributions if the government is somehow taken out of the business of redistribution through taxes and spending. So some moderate redistribution seems to me alright. I think without it we would have a less just and less tranquil society. But I don't like to see too much of it.

You mean too much government?
Yes, I mean it's well-intentioned perhaps, but when it is growing we don't exactly know what is going on or how much. We never know exactly what the optimum is here. The result of too much government and too much redistribution is reduced incentives and growth, hence also more cyclical and other instability.

What do you see as the biggest threat to capitalism?
Well, the biggest threat has been temporarily and perhaps for a long period of time, abolished. That is, the threats first from fascism and then from communism. We buried them and not they us, as Khrushchev

predicted. So we are free of those threats. I think capitalism has triumphed, but in a particular form, after long periods of various reforms. And that probably was in part the contribution of moderate or democratic socialism, these reforms that happened. And they happened not only without the blessings of the radical left, it was against their strenuous opposition. They claimed that it never can happen, capitalism can never come to grips with poverty and inequality. Well it has to a very large extent.

Are there any particular trends in economic research or schools of thought you find disturbing?
Well yes, for example, emphasis on efficiency to the detriment of all distribution. On growth versus instability of business cycles, I think growth is a major, perhaps the major problem. But instability of business cycles remains important as well. Less growth often means more instability, too. Elimination of depression and poverty is as high as you can put it on my agenda. So economists have social, and indeed even moral and ethical objectives. That should not detract in any way from the objectivity of their research, quite the contrary. But there is nothing wrong with an economist who is socially conscious.

Then we all have a lot to do, don't we? There is still a lot to know.
Some people go along on this. The late Bill Vickrey, he is an interesting case of an exceedingly socially conscious economist.

Everyone wants to know, could it happen again? Could we have another Great Depression?
I cannot say it could never happen again, but it will not happen again in the same form, this I know. So, if it comes at all, it will be very different and will be unexpected. Most downturns come unexpectedly and are not forecasted. They are not even recognized promptly despite the fact that we have good tools in leading indicators. This is partly because we do not want to see them. A lot of people in business make forecasts that don't make much sense. For the next year or two, or even three or four years ahead they don't recognize that recessions exist and will return.

Like the Hoover administration of the 1930s. They did not want to recognize that they had a problem.
And we still don't recognize it. We have official forecasts without recessions. I gave a paper at the Congressional Budget Office at their invitation on their

assigned topic “Has the business cycle been abolished?” I answered in the negative. They say that they do take recessions into account, but not formally, because they are not able to forecast the timing of the next recession cycle. And I agree with that, you cannot do it well, but you still must take it into account.

Thanks so much professor.