

Moses Abramovitz

When the discussion turns to the pioneers of the literature on post-war economic growth, three names come immediately to mind: Simon Kuznets, Robert Solow, and Moses Abramovitz. Professor Abramovitz's contributions to this literature are substantive and include recent articles such as "Convergence and Deferred Catch Up" (1996), "The Search for the Sources of Growth: Areas of Ignorance, Old and New" (1993), "Catching Up, Forging Ahead and Falling Behind" (1986), and the book *Thinking About Growth and Other Essays in Economic Growth and Welfare* (1989).

Abramovitz's contributions to the literature on the Great Depression focused on the hypothesis that downturns and depressions were a natural consequence of long swings in economic activity. Moreover, given the international nature of the Depression and the commitment to the gold standard, the Federal Reserve was virtually powerless to prevent the slide in the money stock that took place during this time. His two papers on this topic "Determinants of Nominal-Income and Money-Stock Growth and the Level of the Balance of Payments: Two-Country Models under a Specie Standard" and "The Monetary Side of Long Swings in U.S. Economic Growth" were never published. I was aware of them and rather than let them fade away forever, I wanted Professor Abramovitz to talk about his ideas contained in these papers, among other topics.

Professor Abramovitz received his A.B. from Harvard in 1932 and his Ph.D. from Columbia in 1939. He was a lecturer at Harvard in the mid-1930s and worked at the National Bureau of Economic Research from 1938 to 1946. During World War II he served in the Office of Strategic Services (OSS), was President of the American Economic Association in 1980, was managing editor of *The Journal of Economic Literature* from 1980 to 1985, and was Coe Professor Emeritus of American Economic History at Stanford University. We spoke in his office in April 1998. He passed away December 1, 2000.

Professor Abramovitz, you wrote two papers on the Great Depression, "Determinants of Nominal-Income and Money-Stock Growth and the Level of the Balance of Payments: Two-Country Models under a Specie

Standard” and “The Monetary Side of Long Swings in U.S. Economic Growth.”

I never published those papers because after I had finished them I became aware of the fact that Harry Johnson had some articles on the subject of the relation between general economic growth and money supply which took the view that it was growth that determined the money supply. It was demand for money created by the fact that we had economic growth.

So money was endogenous?

Money was endogenous, well it's endogenous in my papers too. But, the line of connection between money and economic growth runs from money to economic growth. The determinants of money as I saw them were the growth rate of capital exports plus capital imports. So, in my view, if you start from that international development then you got back to the money supply and from the money supply to economic growth. At that point I joined forces with Friedman, but the exogenous element in his theory was always the decisions of the central bank, in this case the mistaken decisions of the central bank. Whereas the moral of my story was that the central bank had very little latitude given the fact that we were trying to maintain a gold standard, given what was happening to our exports and capital imports. So that was my line, and that was Milton's line on the other side. Where we joined forces was at the point at which the money supply is affected by something. On the other side was Harry Johnson and his view that it was the demand for money determined by economic growth which determined the supply of money. And I could never figure out which way the causal chain went. While I puzzled over that and how to bring it to a head, I got drawn off to other stuff and abandoned my papers.

Let me just pull a quote from Schwartz's 1981 paper “Understanding 1929–1933” and see if you agree with it. “Abramovitz believes efforts by the Federal Reserve to sustain the growth of the US money supply in 1930–31, unaccompanied by the similar actions by leading European countries, would not have been adequate to prevent the massive decline in income that in fact occurred.”

Well that is the end result of what I'm saying, yes.

“He regards the great decline of nominal income as inevitable, short of implausibly drastic accelerations in the creation of Federal Reserve credit or in the high-powered money multiplier sufficiently large to offset the declines in the sum of merchandise exports and capital movements.”

Yes, that's right – given our commitment to maintain the gold standard at the old rate of dollar–gold exchange.

That's the essence of it. But you joined forces with Friedman in realizing it was something that was exogenous.

Yes, it was exogenous so long as one is not capable, and certainly I was not, of putting together the theory which encompassed the rest of the world (*laughter*).

OK, that's refreshingly truthful.

Yes.

Well, let me ask you one more thing that maybe you could talk a little more about that's related to this, and I am quoting you now: "The experience with long swings suggests that our liability to severe depression may be a normal part of a swing in the rate of growth which may itself be due, in part, to recurrent causes."

That is right.

Can you please amplify and elaborate on that because there hasn't been a lot done lately with ...

Long swings, no there hasn't.

Rather than just let that die forever, I want you to talk about it now.

Alright, I'll have to approach this from several directions.

Please do.

A hint about the nature of one direction you'll find in a wonderful book by a man named Hoyt called *One Hundred Years of Land Values in Chicago* which traced the fluctuations in the prices of real estate in Chicago for 100 years, from the 1830s into the 1930s.

I am aware of that book.

Well if you're aware of it, then you'll remember that he described the fluctuations in the following terms. We were living in an expanding economy in the US in the first place, and Chicago in particular in this period of urbanization. So if you entered a period in which the supply of developed land was not able to meet the demand and the price of real estate began to rise, then you had an expansion in the rate at which settlement proceeded. I don't know if settlement is the right word when talking about

a city. At any rate, the borders of the town expanded and the usage of land within the old town became more intense. Given the rising price of those assets, banks became more and more willing to lend money. Mortgages became easier to float. Everything was getting bailed out by the rising price of real estate. This went on for a number of years and optimism about development would always increase, not only through the people involved in developing real estate, but in people who were financing the development of real estate and the banks got crammed with more and more of this paper. And you had an interacting and self-feeding process. We became, after a number of years of such expansion, what you see in the newspapers every morning nowadays, a bubble economy. And sooner or later something pricked that bubble. I connected that in my stuff with a greater difficulty in increasing our exports and in getting capital imports. That may have happened in part because the UK, let's say, had better uses for its money too. At any rate, it became more difficult to continue to finance ever larger expansion and the supply caught up with the demand and the bubble burst. When the bubble burst, the banks found they were full of illiquid assets and a banking panic developed with the kind of effects on real growth that Friedman and Schwartz have spoken about and so well described. This can be generalized. It wasn't Chicago alone which ended these periods of expansion. Chicago was only one of many cities in which such things were happening.

Florida too?

And eventually Florida, yes. This shows up then, in aggregate figures on money supply and the growth of national income. OK, so that's one direction. If you assume that it takes more than one business cycle expansion for a sufficient degree of optimism to generate a bubble economy, then you have a long swing. And it ends uniformly in a serious and protracted depression or period of stagnation. And that's one of the opening characteristics of long swings in everything that I've written. You asked for it so I'm talking about my stuff a little more than I normally would.

That's why I'm here. I want you to give me the long form.

That's what distinguishes what I have to say about long swings from Kuznets. He always treated long swings as a phenomenon in which there is no change in the intensity of use of resources. After he has measured his long swings in a fashion which in one way or another eliminates ordinary business cycles, he thinks he has an economy with a constant ratio of

output to resource use and he develops a theory which is consonant with that. Serious depressions have no part in his theory of long swings. I began with the observation that a serious depression is the culminating event in each of these episodes and I developed a theory which is consonant with that fact. If you go back to that article of mine in *Economic Development and Cultural Change* in 1961, my contribution to the special issue of that journal which was in celebration of Simon Kuznets's 65th birthday, was an appreciative article on Simon's work on long swings and an outline of what I have to say.

Now, if you start from the deep depression, and you look at measures of labor productivity in the course of the ensuing long-swing expansion, by that I mean you measure everything in averages of five years or in averages over business cycles. Suppose you measured growth rates between similar phases of business cycles. Then you discover that the growth rate of productivity comes to a peak very early in these expansions. The growth rate of output per worker or per unit of capital goes up very rapidly at the beginning and then tapers off but continues to rise for quite a while. I attribute that to the fact that the opening phases are a phase of re-employment. After that it's a question of longer-term growth. But with the ratio between the supply of a factor and its employment always going up, becoming more intense, reaching capacity, as the intensity of use goes up, of course, profits rise and the incentive to invest increases. So it increases, but of course at a declining rate of increase. So you have a long period during which investment is growing, but growing at a declining rate. And again you'll reach a plateau and then the other aspect of the matter comes in. The period of continuously rising profits and investments subject only to a period of minor recessions. What I'm trying to say is it becomes more and more based upon continuing optimism, by the long happy period, so that there is a decline in the quality of credit if you like. You can see how my views on the monetary side of long swings fit into this picture. I regard the long swing from the end of World War I, or if you'd like to start at the bottom of the recession of 1920–21 and going on up to 1929, then you have this collapse and a long period of recovery when indeed things are getting better at a very, very slow rate. I regard that as consistent in general with this longer view of history that I hold.

So that's where your long-swing theory fits into explaining the Great Depression?

That's right.

Just for the record can you tell me where you were born?

Brooklyn, NY. I spent the first 16 years of my life there. I was educated in a local elementary school and in what was then a very good high school, Erasmus Hall. I was a good boy and did my homework, and was able to go to Harvard.

Born in 1912 and doing the math, you were in graduate school during the worst part of the Depression.

I graduated from college at the bottom.

Then again in 1939 from Columbia right?

I completed my thesis in 1939, but I was essentially finished with Columbia in 1935.

What role did the Depression play in shaping your thinking and molding you into the economist you are and have been throughout your career?

The most direct and general effect of the Depression on me was that it, so to speak, prepared me to receive Keynes sympathetically. You can't imagine how the professors who taught me in graduate school and those whom I had known at Harvard and knew again from 1936 for a couple of years when I taught there, how they were floundering, caught as they were in neoclassical theory and believing that supply creates its own demand and literally that the Great Depression was caused by the fact that we were keeping wages too high. So when I first read the *Treatise on Money*, not yet *The General Theory*, which was in 1931 while I was still an undergraduate, I immediately felt illuminated because, for the first time, I got some appreciation of the influence of demand on output. And then when *The General Theory* came along in 1936, I was ready for it. I have one small personal reminiscence.

Please share it.

Well, I have this much to say about how I got into economics. I thought when I entered the university that I was probably going to be a lawyer. I never heard of anybody who became an economist. I was utterly and completely disappointed by the courses in literature and history that I took as a freshman at Harvard. I thought they were very superficial. Meanwhile I was taking a very good course in elementary economics from a very good instructor who gave us a piece of supplementary reading, a little book by H.D. Henderson in the old Cambridge economics series. This was a wonderful series of little elementary books put out by Cambridge people

and this one was put out, as I say, by H.D. Henderson. It was called simply *Supply and Demand*. It presented neoclassical theory of value and distribution so compactly and so eloquently, I was absolutely entranced by it.

Anyhow, when I came back in the fall of 1929 to enter my sophomore year, I elected to announce a concentration in economics. I was assigned to Ed Mason to be my tutor. I walked into Mason's office at the end of September and I said to him "Well Professor, when is the stock market going to break?" And he said without blinking an eye, "Almost immediately!" I went away and came back two weeks later and it had happened. So I thought this was sort of remarkable. I said to him again, like the brash fellow I must have been, "Well professor, you must have made a mint of money." Then I learned something about academics in those years. He said "Are you crazy, I never owned a share of stock in my life."

Well, Ed Mason was a really great man. Apart from the fact that he was a very talented economist, he was a man of wisdom, and force, and gravity. I mean he carried weight. That became more and more appreciated as he got older. I then worked for him during the War in the OSS. But he brought me back to Harvard after I'd done three years at Columbia graduate school and I was an instructor and tutor. One more story and then we will get back to business.

Between my first year as an instructor at Harvard and my second year, I got married. So when I got back to Cambridge in the fall of 1936, the chairman called me in and said "We're raising your salary \$200." I said "Thank you very much, that's very nice." He then carefully explained to me this was not because as a married man my expenses were higher. Rather it was because as a married man he could now assign me Radcliffe girls to tutor (*laughter*).

Hooray for the windfall, huh?

Well, the point is just that when I tell this to a company of women, today they are really impressed. They think how strange, how fantastically old fashioned it was to think it would be improper for an unmarried instructor to meet separately with Radcliffe girls. But I was married.

Well that made a difference then.

Yes.

That's delightful.

Where were we?

The Depression and what effect it had on your thinking.

So I described one direction. The other important thing was that when I defended my dissertation, Wesley Mitchell then came and offered me a job at the National Bureau. That would have been sometime in the winter of 1936–37, something like that. I thought things over and decided that working for Wesley Mitchell on business cycles, which is what he wanted me for, would be an interesting thing to do. So my new wife and I moved down to New York and I then began working at the National Bureau, and working on business cycles under Mitchell and Arthur Burns. Arthur by that time had become far more a leader of this enterprise than Mitchell was. And he then, in a sense, taught me the rudiments of actual empirical research. The line of development was the Depression, the inevitable interest that developed in business cycles, and the chance to work on business cycles at the National Bureau. Now, that has nothing to do with my outlook.

But it certainly gave you a career path.

Yes it gave me a career path and it affected the way I have worked ever since. I don't get as far from empirical observation as is so common now. I never have. That's the important thing the Bureau imposed on me.

Were you comfortable with what you were learning in your classes in graduate school and what at Columbia you saw observing the empirical world?

I was uncomfortable. The only course which dealt, even peripherally, with business cycles was Jimmy Angell's course on money and banking. The ideas never added up to a persuasive understanding of business cycles. Now, there were people there who could do better. One of them was J.M. Clark. But he didn't teach business cycles and I never knew about the work he was capable of doing. He wrote a small book, later, which I think is a little masterpiece called *Strategic Factors in Business Cycles*. The qualification I want to put in is that Wesley Mitchell was giving a course called "business cycles." I naturally signed up for it. When I got there, what he was doing actually was taking us through every observable element in the economy and introducing us to a time series and explaining to us how that series moved after you had deseasonalized it. What were the dates of the reference cycles, the specific cycles of the given series that denote the timing of the troughs and peaks, the amplitude and so on. It was aridly descriptive, and divorced from any general notion of what was going on.

But after a month, I went up to him with a petition to drop his course with my signature on it and he signed it and I dropped out of the course. So that was my introduction to Mitchell. However Mitchell never seemed to hold it against me.

Then he hired you later on.
Then he hired me later on.

I think there is a lot more meaning to that. So there was a dissonance between what you were learning and what you were observing in the real world?

Well it wasn't a well worked-out dissonance. I just knew that what I was listening to was not, in itself, very illuminating.

Very well said. Did the sheer magnitude of the Great Depression have an impact on you?

It surely did. That was the whole point. Had it been the recession of 1923–24 or 1926–27 it wouldn't have had any impact on me whatever.

Those were mild recessions.

Of course. Look, I don't have to tell you this. There were sights to be seen on the streets of Manhattan which were very, very disturbing, to say the least. The apple sellers, unemployed men trying to pick up a few pennies to help support themselves and their families by buying a little carton of apples, putting it on a folding chair on a street corner, polishing them up and offering them for sale. They were being bought not because people wanted an apple. It was a way of providing some charity for this guy. There was relief, but it was miserable and disorganized. Unemployment insurance didn't come in for several years after 1932, never mind 1929–32. It was 1935 or 1936 before an organized unemployment insurance scheme was in force. Labor exchanges only began to be organized because the administration of unemployment insurance went through the states and it was they who had to dole out the dough and you had to register for employment in order to pick up your unemployment insurance. So it's the beginning of some exchange of information and obviously there was no Social Security to help maintain the incomes of elderly people and the general income at the same time. People were delighted by a heavy snowfall because it was a chance to put people to work clearing the snow. These were developments unprecedented even by serious depressions in the past. This was the worst thing that had happened to us and it kept on

happening for a long time. As you well know, the rate of unemployment as late as 1939 was 14 percent, from the 25 percent at the bottom at a time when agriculture was far more important than it is today. Far, far, more important than it is today. It was the 25 percent multiplied by the inverse of the fraction of the non-agricultural sectors of our economy. It was higher than 25 percent.

I remember my father died in 1932. He died leaving my poor older brother with a contract to try to use a German firm's help to manufacture zippers. He set up a little shop in Stamford, Connecticut. I worked there one summer with him. We were paying machine tenders 40 cents per hour. It provided ludicrous and dreadful levels of income, even for so-called employed workers. It's upsetting to think about it, even now.

You were vulnerable then to the heretical analysis of Keynes as Paul Samuelson has said, that so many of your contemporaries were.

Right.

So the Depression set you up to be a ...

Keynesian. Right. I was still teaching at Harvard in 1936 when my friend and later colleague here at Stanford, Lorie Tarshis, came back from Cambridge where he had been attending Keynes's seminars, bearing with him the galley proofs of the American edition of *The General Theory* which were duly duplicated and distributed to all the young instructors and graduate students who thereupon then proceeded to make life miserable for their professors. It was we who converted Alvin Hansen. He, as you know, was a critic of Keynes to start with, beginning with the *Treatise on Money* which he didn't like. But, under the pressure of the boys in his seminar, he was converted. But that was one of the very few conversions. The Harvard professors of that day, a few of them put together a little book on the causes of the Depression. That still simply started from Say's Law, the axiom that supply creates its own demand. So unduly high and inflexible prices and wages were the cause of the Depression.

Yes, I've always found, on that one, that you have to suspend your disbelief there. "If prices would have fallen 50 percent instead of 30 percent we would have been OK." That's a real whopper.

Yes (chuckling).

Did you also have the feeling at the time that after 1933 there's no going back? Did you have this feeling that many of your contemporaries did that

there was no going back to the previous orthodoxies? There will be no more status quo ante. Something has to take the place of what we've known before.

Yes. I never expressed it that way, but that certainly was the view of us young people. Not only did we need a different answer, we had it (*laughter*)!

Keynes coming in and having this new orthodoxy, Roosevelt and so on, you have written before that Mancur Olson has said "Defeat in war, and the accompanying political convulsion is a radical ground clearing experience opening the way for new men, new organizations and new modes of operations and trade better fitted to technological potential." Can we view the Great Depression as analogous to this?

I really don't know how to answer that one in its application to the Depression. What you sensed was a gradual change in the attitude of business executives towards the incursion of the federal government into the regulation of the economy. The gradual change from the sort of opposition which expressed itself in the simple view that federal government regulation was tantamount to the beginnings of socialism and had to be opposed root and branch. Well, that gradually shifted and more and more people in the upper ranks of business accepted the fact that we live in an economy in which the government has to act as a make-weight in many spheres of the economy. And that view then held sway until relatively recent years when of course there's been a swing in the opposite direction.

That's a long swing too, huh?

A very long swing.

Paul Samuelson has said it's unfair to place the blame at the doorstep of the Federal Reserve since to have asked the Fed to increase the monetary base by whatever amount was necessary to avert the Depression is hindsight and it was beyond contemplation and discussion at the time, it wasn't ever talked about. Do you agree with that?

In those quantitative terms it certainly was not talked about. Nobody supposed that the Fed either should or could use, let's say, its open market operations to increase the supply of money by huge amounts. That was grounded on a simple fear of inflation. Never mind that we had 25 percent unemployment. Such a huge increase in the money supply equals inflation. So it wasn't talked about. And of course, in my view, it was not a possible

Federal Reserve action so long as we were going to remain on a gold standard. And remaining on a gold standard was, for very long, the rock bottom policy. So Samuelson is right. I don't know whether he would have said it in those terms or not. But I think he came out in the right place.

For people like me, the Great Depression was a broadening of horizons in other ways as well. The New Deal was very much in our thoughts.

That was going to be one of my questions. What impact did the New Deal have on you?

Me personally, it simply broadened my horizons, it's about what a young man could do with himself. As a young economist, you didn't have to think of teaching as your only career line. You could think of a career in government, and we could see one scholar after another going for a longer or shorter period of time to Washington, being engaged in serious and weighty affairs. That appealed to anybody who wanted to have some influence on economic welfare.

Did it personally invigorate you like the slogan "We will roll up our sleeves and remake America"? Did it energize you like that?

No, I can't say that it did. No, I never came to think that I had to devote myself either directly to work in Washington or to writing articles with a direct policy influence. I was caught up first in graduate work and second in research. I thought research is how I contribute something. So I wasn't rolling up my sleeves to go out and do battle with the dragon. Plenty of young men were, let me tell you. The New Dealers, the brain-trusters, they were very public spirited people at the time.

But did you view the New Deal economically as at least a refreshing change from what we had?

Oh absolutely, there is no question about it. All of us youngsters were New Deal supporters. We were all New Deal supporters in the sense that we could see that something had to be done to increase demand. We wanted to increase incomes, and so demand for goods, and so employment, and so on around. And the structure of Social Security, the fact that benefits were divorced from previous contributions, was part and parcel of the business of supporting demand. We didn't want a Social Security system where everybody paid an employment tax and didn't get immediate benefits from it. We wanted something that paid immediate benefits. Later on the employment tax would help pay for those benefits. But we didn't want to increase saving through unemployment premiums.

You wanted to get disposable income in people's hands.

Right, exactly. I can't remember that there was any opposition to that at the time. Look, I mean we were all strong economists enough not to like the NRA. And for the same reason, we didn't much care for the Agricultural Adjustment Administration either. We would have preferred an honest subsidy to farmers to raise their incomes without the business of plowing in whatever it is they were plowing in. We didn't want to raise prices, we wanted to lower prices.

James Hamilton has said the resumption of the gold standard could not have come at a worse time or for poorer reasons, back when it was resumed in the 1920s. What's your angle on the gold standard and its role in the Great Depression?

Well in a sense I've already told you. It meant that the money supply was, at bottom, governed by our ability to attract international reserves through exporting goods and importing capital. So, I trace both the initial decline in the money supply and its subsequent drop to what was going on on the international front. Now, never mind that I have in the back of my mind the fact that maybe the line of causation runs the opposite way. I put it away in the files (*laughter*).

Didn't many economists at the time consider it a mistake for Roosevelt to scuttle the gold standard?

Yes. Sure, many did, but not the young people.

They thought perhaps it was an international betrayal.

Well, it was worse than that, it was breaking our contract with everybody who invested his money, especially in government securities. We were no longer going to pay them off in gold dollars.

Wasn't there anybody that thought ...

I had a professor of finance who taught a course at Columbia, it must have been my first year there, that was academic year 1932–33. His name was H. Parker Willis. He must have at that time been approaching 60 or something like that. We came into his class on the morning when Roosevelt closed the banks. He was utterly livid. He literally was purple with rage over what he regarded as the cowardice of Roosevelt. "That's not how you deal with a run on the banks" (*laughter*).

That's how they did it traditionally though.
I know, the banks closed.

Wasn't there anybody who thought the British had set a good example in 1931?

Sure. Certainly, Roosevelt and his friends did.

Touché.

The fact that they chose to do it by bidding up the price of gold, because of the theories of Cornell Professor George Warren. So Warren and Roosevelt or Warren and Morgenthau met every day and decided how much to bid up the price of gold. Sure, so they went off the gold standard and that was a certain release on the economy.

What ended the Great Depression?

The War ended the Great Depression. As it turned out, presumably, the Great Depression would have ended sometime by other channels. But what actually ended it was the War and the defense program that we set in motion even before we entered the War. That was the beginning. Then, of course, after Pearl Harbor there was no lack of demand.

What are some of the lessons of the Great Depression that seem to be forgotten today or have to be continuously relearned?

Well, I'd say beware of a bubble economy. Now, I think it's an immensely healthy thing that this notion that you have to beware of a bubble economy has percolated so broadly, however much people are increasing their commitment to the stock market and to real estate, they all do so uneasily because they realize this doesn't have to last. That's something which was absent toward the end of the 1920s. There, the notion became dominant, a notion that is not absent today, that we're living in a new era in which the old problems of economic fluctuations are behind us, and we have a new type of economic expansion. What they then called "profitless prosperity."

That makes me scared to hear people talk like that.

Yes. A good little treatment of that, as seen by a young man at the time, is Eli Ginzberg's 1939 book entitled *The Illusion of Economic Stability*.

Did the Depression have any effect on the 1946-73 growth record?

I think so, I can't demonstrate it. I think so. The American, so to speak, starvation for durable goods started in the Great Depression and was

aggravated by the restrictions on output of automobiles and the scarcity of other kinds of consumer durables during the War. So, when the War ended and people had in the bank, so to speak, or in other liquid forms, the incomes they couldn't spend during the War, there was a backlog of demand which certainly had its influence for quite a number of years on the expansion of the American economy. Now, this applied also to civilian investment which was very low during the Great Depression and restricted during the War. And again there was a backlog, so to speak, of technology which hadn't been exploited for darn near two decades. And I believe this constituted a backlog of demand which stood us in good stead during the 1950s. I offer that as an opinion, but that's my opinion.

Do you think Keynes was trying to save capitalism, or to save capitalism from itself?

Oh sure. Yes. I can't quote you chapter and verse but I think he said so himself many times. So that's quite apart from the fact as the old communists used to say, "the objective material consequence of Keynesian theory was to help save capitalism."

What's the biggest threat to capitalism?

No, I don't have a ready answer. I have always had a sympathy for Schumpeter's *Capitalism, Socialism and Democracy*. I think it's worth another look, if you have not looked at it recently.

Does the memory of the Depression stay with you at all? Or have an impact on your thinking?

Oh boy, it sure does. If I had had the courage of my convictions, I wouldn't have had a dollar in the stock market for many years. But I didn't fortunately. Yes, the markets scare me. Now obviously, many, many things have changed. We're really not the same economy as we were in the 1920s and the early 1930s. There has been a substantial divorce of income from employment, so to speak, the circular flow does not comprehend the whole of the national income anymore. Much of it is divorced from employment. We have insurance of bank deposits, widely criticized because it's supposed to remove the risks of banking, change the risks so much that people make unwise credit decisions, and possibly that's so. But we don't have to think any longer about endless bank failures reducing the supply of money. Consumers really don't have to worry about their deposits in the banks anymore. And the Fed, we're not hooked to the gold standard the way we were, and the Fed has learned its business better. So I

think we're different. But yes, does the memory of the Depression linger and affect me today? It scares me stiff.

That's a very sobering answer. Yes, my dad lived through the Depression and he still talks about it. Does contemporary France have the "social capability" to be a high growth, low unemployment country, to use the phrase that you've used in the past?

Do they have the social capability? Well, if they exist as a high unemployment country long enough, things will change in France. It has already taken a surprisingly long time. I think you can see many signs that things are changing in France, as they are in Germany, as they have in Sweden. The things that make it so expensive to employ anybody are getting shifted. So, maybe, we'll see. It's a highly civilized kind of country that they have tried to erect, but it turned out to have its difficulties. The wages and labor costs in general have become inflexible in France, to a degree that we never knew in this country. Never mind what my professors were talking about in 1929–30.

What are your comments on the explosion of the research on growth and the endogenous growth literature recently?

Well, to center the notion on the important question "Is technological progress endogenous?", I'd say yes, but in a more limited way than the modern growth theorists assume. My colleague Nate Rosenburg, remembering Shakespeare, once put it neatly when he said "You can call up spirits from the vasty deep, but will they answer when you call?" You can have all sorts of conditions that favor technological progress, but if the state of technology and its underlying science is unfavorable to further progress at the same rate, it ain't going to occur. There can be dry periods without a change in all those circumstances which are supposed to control technological progress endogenously. That's my belief.

Could another Great Depression happen again?

My own sense of the matter is that the severity and length of the Great Depression of the 1930s could not happen again in the economy we know today. But serious reversals, lesser in magnitude, more transient than the Great Depression, I certainly think are possible. And who can forecast how the underlying features of the economy will change over time? It may make us more vulnerable to great disasters we can't envision now.

That made me nervous, what you said about some people, the profitless

expansion, we can't have any more collapses. When people start talking like that it is a source of great anxiety.

This always makes me think of 1928.

Thanks so much Professor.