

# Federal Reserve Board Oral History Project

Interview with

Lyle E. Gramley

Former Member, Board of Governors of the Federal Reserve System

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Interviewers: David H. Small and Lawrence Slifman

## Federal Reserve Board Oral History Project

In connection with the centennial anniversary of the Federal Reserve in 2013, the Board undertook an oral history project to collect personal recollections of a range of former Governors and senior staff members, including their background and education before working at the Board; important economic, monetary policy, and regulatory developments during their careers; and impressions of the institution's culture.

Following the interview, each participant was given the opportunity to edit and revise the transcript. In some cases, the Board staff also removed confidential FOMC and Board material in accordance with records retention and disposition schedules covering FOMC and Board records that were approved by the National Archives and Records Administration.

Note that the views of the participants and interviewers are their own and are not in any way approved or endorsed by the Board of Governors of the Federal Reserve System. Because the conversations are based on personal recollections, they may include misstatements and errors.

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MR. SMALL. Today is Monday, May 14, 2007. This interview is part of the Oral History Project of the Board of Governors of the Federal Reserve System. Today we are interviewing Lyle E. Gramley, a former Governor of the Board. This interview is taking place at the Board of Governors in Washington, D.C. I am David H. Small of the Board staff, and I am joined by Lawrence “Larry” Slifman, also of the Board staff. Mr. Gramley, thank you for joining us.

MR. GRAMLEY. My pleasure.

MR. SMALL. You worked here at the Board both as a staff member and as a Governor.

MR. GRAMLEY. Right, I was a staff member at the Board from 1964 until 1977, and then I was a Governor from May 28, 1980, to September 1, 1985.

### **Education and Professional Background**

MR. SMALL. Let’s start with your background—focusing on what got you interested in economics, some of your educational experiences in economics, and major people in your education that left an imprint on you.

MR. GRAMLEY. I got out of the Navy in 1947 with the intention of being an electronics engineer. I was planning to spend the first two years at my hometown college—Aurora College in Aurora, Illinois—getting some liberal arts background and then going on to an engineering school, maybe Carnegie Tech or someplace like that.

In my first semester I took a course in Econ 101, as many people do. A new professor of economics had just arrived at Aurora. I thought of her as a little old woman. She was diminutive and probably in her mid-50s. She had just arrived after teaching for about 20 years at the University of Geneva in Switzerland. When she came into the classroom on that first day, instead of sitting behind the professor’s desk, she took a student’s chair, turned it around

backwards to face the students, put her purse on the floor, and began to lecture without a single note. Her specialty was the history of economic thought. She lectured with a ferocious German accent. I didn't learn much technical economics from her, but I learned an awful lot about the development of economic thought and how economics and philosophy fit together. I was utterly fascinated and decided on the spot to become an economist.

This professor, whose name was Dr. Louise Sommer, ended up teaching at Aurora College because she was a vegetarian by preference and Aurora College was associated with the Advent Christian Church. Dr. Sommer knew that on the continent the Seventh Day Adventists were vegetarians, so she came to Aurora thinking she was going to get a vegetarian diet.

[Laughter] She didn't succeed, but because of that I became an economist.

I spent two years at Aurora, then two years at Beloit College in Wisconsin. Then I did my graduate work at Indiana University. I got my Ph.D. degree in 1956. I left Indiana in 1955 and became a financial economist at the Federal Reserve Bank of Kansas City. That was my first job with the Fed. I spent seven years there. Then I came to Washington and spent two years as a professor of economics at Maryland. I was a staff member at the Board from 1964 to 1977. From 1977 to 1980, I was a member of President James E. "Jimmy" Carter's Council of Economic Advisers (CEA). Then I went back to the Board from 1980 to 1985, and since then I've been in the private sector.

### **Working at the Federal Reserve Bank of Kansas City**

MR. SLIFMAN. Could you briefly discuss the work you did with Samuel B. "Sam" Chase at the Kansas City Fed? That work influenced me as a graduate student.

MR. GRAMLEY. That's interesting. Sam died about a month ago from colon cancer. Sam and I were close, lifelong friends. He was very interested in monetary policy, but he was

also interested in a variety of different aspects of economics. He was both a microeconomist and a macroeconomist. He was doing work at Kansas City that got noticed not just within the Fed, but in academia and on Wall Street. Fiscal policy was one of his principal interests. He moved to the area of bank regulation and was a staff member in that area here at the Board.

MR. SLIFMAN. Did you work with him in Kansas City on financial intermediation?

MR. GRAMLEY. We had common interests, but we didn't work together particularly. We were both interested in how monetary policy worked. We were both nonmonetarists, and later on he and I did some work together in that area.

MR. SMALL. What were your views at that time about how monetary policy worked?

MR. GRAMLEY. I rejected the view that there was any direct way that money creation could affect economic activity. I was a Keynesian by persuasion and by training. I thought monetary policy worked through what it did to interest rates.

The process of setting interest rates was more complicated than I realized. I didn't pay much attention to the distinction between real and nominal interest rates, but I've since learned that you should. I think I was a conventional Keynesian economist at that time.

### **Working on the Federal Reserve Board Staff during the Martin Chairmanship**

MR. GRAMLEY. Looking back at my days as a Board staff member, I didn't recognize that inflation would be the major problem it turned out to be. So during that time, my contribution to the inflationary process was not what I would have liked it to be.

MR. SMALL. When you came to the Board, which section did you work in, and what were your job responsibilities?

MR. GRAMLEY. My first responsibility under Stephen P. "Steve" Taylor was to discover how the flow of funds was put together. I was not the first person ever asked to do that,

but I was put in the Flow of Funds Section as a financial economist to figure out how the flow of funds data were put together.

I began by looking at the commercial banking sector because I knew that better than any other sector. Over about six weeks, I figured out the different symbols for the various elements of the commercial banking sector. I often had to wait until Steve came to work. He worked from five o'clock in the afternoon until four in the morning, somewhere around there. At the end of the project, I wrote up the results, delivered them to Steve, and said, "Steve, I've worked out completely how the flow of funds handles the commercial banking sector." He looked it over and said, "Boy, that's really interesting. The only problem is that for the last six weeks I've been revising the way we're doing that." I said, "Do you mean to tell me that you've let me sit here for six weeks working this out, not telling me that you were revising the whole thing?" "Oh, well," he said, "This will be useful for historical purposes." I went to Daniel H. "Dan" Brill, who had hired me, and I said, "Dan, it's hopeless. Nobody's ever going to figure out how the Flow of Funds Section works while Steve Taylor is there." So he moved me out of the Flow of Funds Section into the Banking Section.

MR. SMALL. At that time, what kind of intellectual capital could you rely on from colleagues at the Board?

MR. GRAMLEY. When I arrived at the Board as a staff member in 1964, a process had just begun to build the Board staff. Dan Brill was then the director of the Division of Research and Statistics. He had held that position for a couple of years. He looked around at the staff and decided it was utterly inadequate. There was practically no one that had modern—for that time—analytic economics.

He went to William McChesney Martin, Jr.—the Chairman of the Fed then—and said, “Mr. Chairman, the Board ought to have the best professional staff in the world, and we are a long, long ways from that.” So Dan got permission to use whatever money was needed to build a staff. He began hiring people like James L. “Jim” Pierce, Thomas D. “Tommy” Thomson, and Jared J. “Jerry” Enzler. And he brought in Donald D. “Don” Hester as a visiting professor.

So ferment was beginning to develop when I first got here. But a lot of the old-line people were still running things. They had a lot of experience in thinking about the economy but really were not well-trained economists. The staff has built up since then into the best staff anywhere in the world, and Dan Brill deserves an awful lot of credit for that.

After the staff in the Division of Research and Statistics began to grow and to become more analytic, Robert “Bob” Solomon, who was the director of the Division of International Finance, went to Chairman Bill Martin and said, “We’ve got to do the same thing in the international division that the Division of Research and Statistics is doing.” He got permission from Chairman Martin to spend the money to do that, so the international division also began to develop.

Maurice H. Schwartz, universally known as “Herbie” Schwartz, also played an instrumental role in what was going on here at the Board. He dragged the Fed kicking and screaming into the age of the computer. Somewhere around 1955 or 1956, Herbie got the Board to buy an IBM 650. He began to offer programming classes, so staff economists here at the Board began to learn how to program. Then he extended that privilege to economists in the hinterland. Sam Chase and I came to Washington and spent a week here learning how to program the IBM 650. Since we didn’t have facilities at our Banks to do any work—other than using the Marchant calculator, which is rather tedious—Herbie would have us develop punch

cards and send them to Washington. He'd run the regressions for us, send us back the results, and then we'd do some more regressions. That's how we learned to do analytic econometric work at the Reserve Banks. Herbie even had a person working here on analog computers for a while. It wasn't entirely clear that digital computers were the direction that the computer industry would take, so he had a person working on analog computers at the same time.

MR. SLIFMAN. You started out in the Flow of Funds Section briefly and then moved over to the Banking Section. At what point did you make the transition from working on banking and financial issues to working more generally on the macroeconomy and eventually spending much of your time on the nonfinancial parts of the economy?

MR. GRAMLEY. I worked in Flow of Funds for a while, doing some longer-range research. When I went to the Banking Section, it was with the desire and the willingness of Dan Brill to accept the transition into work on the macroeconomy, both on the real as well as on the financial side.

MR. SLIFMAN. Even though you were in the Banking Section?

MR. GRAMLEY. Within the Banking Section, yes. One of the first things I did, for example, was to run what Dan called the chart shows. We used to put on a quarterly presentation to the FOMC (Federal Open Market Committee) where we would use charts. At first I was working with Stan Sigel. Then he was dropped from that project, and I began to head the chart show effort under Dan's supervision and tutelage. That got me involved in the process of forecasting. So by the time I became division director, I had been working in the forecasting area, in the macroeconomy area, for six or seven years.

MR. SLIFMAN. So the innovation of chart shows occurred in the mid-to-late 1960s, is that correct?

MR. GRAMLEY. Somewhere in the range of 1965, 1966, 1967. Yes, I'm sure it was that early, because I remember that in one particular case, we did a chart show on the War on Poverty, and that began, as I remember, in 1965.

MR. SLIFMAN. And these were for the Board or for the Committee or both?

MR. GRAMLEY. For the Committee.

MR. SMALL. You mentioned that Chairman Martin supported the effort to build up the research function. Did he call on the research staff much for analysis? Did any of the other Governors pull studies or analyses out of the research staff, or were they left to do their own thing?

MR. GRAMLEY. Chairman Martin had relatively little interest in the work of the staff. In FOMC meetings, he would frequently say that he was standing in a line waiting to get into a movie and talking to the person behind him or in front of him, or talking to a taxi driver, about the state of the economy. He'd bring in anecdotes of that kind.

We began to see a change in the nature of the Governors with the appointment of George Wesley Mitchell in 1961 and the appointment of Sherman J. Maisel in 1965. Sherm Maisel was a trained economist who probably was quite instrumental in getting the FOMC to think about forecasts, and the staff began to present forecasts. As I recall, it was only for two quarters ahead at that point. George Mitchell used the staff quite actively. Sherm Maisel did, too, but most of the Governors were not trained in economics, and they really didn't understand what the staff was doing.

MR. SMALL. Did you have many interactions with Chairman Martin?

MR. GRAMLEY. The only interaction I had with him was when I went with others into a briefing session that Martin would have before giving testimony, but I was not a particularly

highly placed staff member at that point. I didn't get involved actively with the Chairman until Arthur F. Burns arrived in 1970.

MR. SMALL. You were here when inflation started picking up during the Vietnam War, much before Burns arrived. What did the young staff think about that? Were they having any problems with the old staff in communicating or debating?

MR. GRAMLEY. There wasn't a lot of debate. I think all of us underestimated the damage that inflation could do. We were still under the erroneous notion that, even in the long run, the Phillips curve had a significant slope to it, so that you could trade off a little more employment and less unemployment if you're willing to let inflation go up a bit. I think that was probably the conventional wisdom of the time. And if you weren't particularly worried about the damage that inflation could do, then you didn't provide advice to the policymakers of the sort that I think the staff would today. I didn't see any real difference between the new staff that was coming on board and the old staff.

There were one or two people in the international division, particularly Arthur B. Hersey, who used to feel strongly about inflation. When we made a joint presentation to the FOMC—during a chart show, for example—we sometimes were horrified at what Arthur Hersey was telling the FOMC. I wish we had joined him in his protestations.

MR. SMALL. Was there a sense that the international aspects—Bretton Woods and exchange rates—would influence the conduct of monetary policy?

MR. GRAMLEY. Not a lot, no. The international sector was nowhere near as large, relative to the size of the economy, as it is now. We had fixed exchange rates at that time, until 1972.

Indeed, I can remember that, when we were putting together forecasts, sometimes the international division would come in with some radical changes in the quarterly pattern of net exports. We would get furious because, although the endpoint was about the same, it would disrupt our quarterly pattern with GNP (gross national product) growth, and then we'd have to make some accommodation for it. It wasn't anywhere near as large a factor in thinking about monetary policy as it is today.

### **The Chairmanship of Arthur F. Burns**

MR. SMALL. Was there a change in the "working" culture in the transition from Martin to Burns? Did Burns bring different demands on the staff?

MR. GRAMLEY. Yes. Burns was a person who ate up data. We had to provide data books for him. Burns had an almost perfect photographic memory from when he was a child. Sending down a data book to Burns with wrong numbers was something you just didn't do. We put a lot of resources into making sure those data were absolutely accurate.

One day I got a call from Catherine Mallardi, the Chairman's secretary, saying, "The Chairman wants to see you right away." I rushed down to his office. He had the data book and said, "Lyle, these numbers on the GNP deflator are wrong!" I said, "Mr. Chairman, we don't send you bad numbers." "These are wrong!" he said, "I very distinctly remember the numbers," and he cited a whole series of quarterly figures on the GNP deflator. I said, "Mr. Chairman, it's the first of August, and you forgot that we had a three-year GNP revision in July. Those are the old numbers that you recited for me. These are the new numbers, and they're correct."

Burns ate up data, and he used staff in that respect, but he didn't have any appreciation for the value of long-range research. He was a different kind of economist. He was an old-fashioned business cycle economist—and a good one.

MR. SMALL. What do you mean by that?

MR. GRAMLEY. Well, he and George Wesley Mitchell founded business cycle research in the old-fashioned sense, in what was then the National Bureau way of looking at things—looking at leading indicators, lagging indicators, how things fit together. Burns knew the data very well. Not as well as Alan Greenspan, but he did know the data well.

I was Burns's speechwriter. In 1970, one of the early speeches I wrote for him was about the state of the economy. At that time, he was personally convinced that the economy was probably heading into recession, but he didn't want to admit that publicly. So this speech—or maybe it was a piece of testimony—was designed to say, "The economy is weak, to be sure, but things aren't developing along the lines yet that would indicate recession." I had written a sentence that said, "A feature of postwar recessions is a decline in business fixed investment, and so far business fixed investment has continued to increase."

After he read that speech, he called me to his office. He had rewritten the sentence to say that "a feature of all historic recessions is a decline in business fixed investment." He said, "Lyle, you have to check that." I said, "We'll do that. I don't know where to check, but I've got staff." "No," he said, "I'll tell you where." He told me where to look for the postwar data, but for the prewar data he said, "Now, you look in this book." I think it was by Simon S. Kuznets or whatever. But anyway, I found that in the recession of 1861, the figures on equipment showed that there was a continued increase in real terms. I went to him and said, "You're going to have to soften this sentence." He said, "Now, just wait a minute here. I recall those data were in constant dollars, were they not?" I said, "Yes." He said, "Back in those days, prices could decline. Nominally, it might have gone down." I said, "Yes, that's possible." Then he said, "Those data exclude the construction sector, and construction spending might have gone down."

I said, “Yes, that’s true, too.” “Besides,” he said, “the recession of 1861 was extremely mild.” Now, how would he remember that? He had a phenomenal memory.

MR. SLIFMAN. During that period, there was a change in the professionalism of the staff. And several interesting staff studies were done during that time—one on ways to moderate fluctuations in housing and one on capital formation—where people put enormous amounts of intellectual content.

MR. GRAMLEY. I directed the study on ways to moderate fluctuations in housing.

MR. SLIFMAN. How did that come about?

MR. GRAMLEY. Burns’s first testimony before the Senate Banking Committee was on housing. He got beat up badly because, during the latter half of the 1960s, we went through some violent fluctuations in housing. So he promised a staff study, and I was appointed to direct that study. We got some work done by staff members, but we also brought in outsiders.

Many of the recommendations in that study became important features of the way the mortgage market works now—we thought variable-rate mortgages ought to be introduced. We thought that dependence on depository intermediaries ought to be supplemented by bringing in the capital markets to help supply credit to the housing industry. We thought that deposit ceilings at banks and thrift institutions ought to be removed.

None of those recommendations were implemented right away and probably had no effect on the changes that were adopted later on. But it was a set of recommendations that foresaw actual developments in later years.

MR. SLIFMAN. And so that grew out of a promise that Burns made to the Hill.

MR. GRAMLEY. Right. The other things done grew out of the intellectual interest of the people that were working on them. The study you mentioned.

MR. SLIFMAN. There were a couple. One was the conference on the econometrics of price determination. Another was on capital formation headed by Jerry Enzler.

MR. GRAMLEY. You may remember, too, that the Fed was deeply involved in the study begun in the mid-1960s that developed the Penn-SSRC-FRB model.

MR. SLIFMAN. Yes.

MR. GRAMLEY. We supplied people for that. And it provided the foundation for the development of the first Board macro model.

MR. SMALL. So that was Brill or someone going to Martin and saying, "We want to support this. We think this would be useful for the world."

MR. GRAMLEY. Right. Martin was willing to do that. We had the people that were willing and able to make an important contribution to the project.

MR. SLIFMAN. And it lives on today as a key resource for us.

MR. GRAMLEY. Right.

MR. SMALL. What was the evolution of Arthur Burns's thinking, for example, on wage and price controls? And what about his struggles during the Nixon Administration?

MR. GRAMLEY. Arthur Burns wasn't a monetary economist, and he certainly did not propound the view that inflation was anywhere and everywhere a monetary phenomenon. He wasn't terribly complimentary about Milton Friedman's work in general.

But he had strong beliefs about inflation, and he thought that the central bank needed some help in fighting inflation. He thought about the possibility of using some sorts of incomes policies to improve the tradeoff between employment and inflation. He certainly did not believe in mandatory wage and price controls, though. He was under a good bit of political pressure to

keep monetary policy stimulative. There have been questions raised repeatedly about 1972 and what his motivations were in that respect.

I was quite close to Arthur Burns. I was one staff member who could tell him he was wrong without fear of getting my head taken off. There's an episode that occurred around June or July 1972 that lead me to question the easy assumption that Arthur Burns was simply pushing monetary policy to reelect President Nixon. He called me down to his office and said, "Lyle, I've got a wonderful opportunity. I'm making a luncheon speech to the American Economic Association and the American Finance Association in Toronto in December." He said, "I want to make a hard-hitting speech on inflation." He laid out for 5, 10 minutes or so the way he wanted to organize the thing.

When he got finished, I said, "Mr. Chairman, you haven't asked for my opinion on whether you should give that speech, but I'm going to give it to you anyway. I think you ought to change the subject." He looked at me and said, "Why do you say that? All my life I've been a strong believer in holding down inflation." I said, "Yes, I know, and you're running a monetary policy that's going to blow the economy right out of the water."

He looked at me with utter astonishment and said, "How can you say this? The unemployment rate is almost 6 percent. That's the level of unemployment we have in a recession. Besides, the growth of M1 is less than the growth of real GDP. How can you say we're running too expansive a monetary policy?"

I said, "Mr. Chairman, this is part hunch. We don't know what the full-employment unemployment rate is. We're running an economy in which price inflation is being suppressed by mandatory wage-price controls. The money supply numbers, I think, are unreliable. When you stand up there in December, you're going to find that M1 is growing at about 8 percent a

year,” which turned out to be a quite accurate forecast, although it was off the top of the head at the time. My instincts told me that GDP couldn’t possibly grow as fast as it was then without getting into trouble.

We talked for about 20 minutes, and he said, “Lyle, you know how much I respect your opinion, but in this case, you’re just wrong. I have to disagree with you.”

Burns was a complex man, and he was clearly under political pressure. We know that from the Nixon tapes. I think he thought that as long as he was at the central bank running things, somehow it would all work out, but it didn’t turn out that way.

MR. SMALL. Do you think that either Burns or Martin at times felt there was a calculus of possibly being too tight and sacrificing too much independence?

MR. GRAMLEY. I wasn’t close enough to Martin to know how he felt in that respect, but on more than one occasion Burns said, “Lyle, you have no idea of the pressures that I’m under to keep monetary policy easy. You have no idea.”

MR. SMALL. And you took that to be pressures from the Administration or the Congress—the House and Senate oversight committees—or both?

MR. GRAMLEY. He was talking about the Administration.

MR. SMALL. You mentioned that you talked with him. Where else do you think Burns went for confidential advice? Did he go to academics he knew? Did he go to any Board members, Bank presidents?

MR. GRAMLEY. Let me first talk about Burns’s contacts. We had meetings, academic consultants meetings, fairly regularly during that period. It may have been once every six months, or it may have been once every quarter, I don’t remember. But we had academic economists, and we’d try to get a fair sampling of opinion. So Burns was exposed to that. He

was a good friend of George P. Shultz, who was then Secretary of the Treasury (1972–74). Shultz used to come over to have lunch with Burns or have conferences with him quite frequently. And Burns had developed, during his earlier period as chairman of the Council of Economic Advisers (from 1953–56), a fair number of contacts in the business community. So he would call businessmen, and they would come in to see him. He had a lot of contacts of that kind.

One Monday morning I came in to the Board garage, and Hugh D. Galusha, Jr., who was president of the Federal Reserve Bank of Minneapolis, happened to arrive at just the same moment. He said, “Lyle, I’ve got something for you.” He held up a T-shirt with a picture of Burns on the front of it smoking a pipe. I said, “I’ll bet you John H. Kareken”—who was an economic advisor to the Bank—“sent that.” He said, “Yes, that’s correct.” I said, “I’m going to wear this to the Board meeting this morning.” He said, “Oh, you’re not either.” I said, “You just wait and see.”

So before the Board meeting, I put on the T-shirt underneath my coat jacket, and just before the Board meeting was to begin, I stood up quite ostentatiously, took off my jacket, put it on my chair behind me, and stood there tucking this T-shirt in so everybody could see what it was. Burns is looking down the way, he’s looking down the way—didn’t say a word. The Board meeting began. And the funny part was, his secretary told me later that he came to her and said, “What was Lyle wearing?” She said, “That was a T-shirt.” He said, “What’s a T-shirt?” He was still wearing BVDs.

**Forecasting at the Board**

MR. SLIFMAN. I want to understand your transition within the Research Division. When Burns came in 1970, you were number two behind J. Charles “Chuck” Partee, is that right?

MR. GRAMLEY. Right. I was moving up in the organization, working under Dan Brill. Dan was a good friend of mine. I was called an adviser to the division when Burns arrived. When Dan Brill left shortly thereafter, Chuck became the director of the Division of Research and Statistics, and I became deputy director.

MR. SLIFMAN. And that’s when you really got involved in the forecasts and things like that?

MR. GRAMLEY. Well, I had been involved in the forecast process before that.

MR. SLIFMAN. Did the forecast process expand? You said initially it was small scale, a couple of quarters out. But, certainly, by the mid-1970s, or certainly by the time you were the division director, the forecast had expanded into something much larger than that.

MR. GRAMLEY. Oh, yes.

MR. SLIFMAN. How did that evolution take place, and under whose guidance and request?

MR. GRAMLEY. I would say the guidance came from Dan Brill. Dan was a close friend of Arthur M. Okun—who was then a member of the Council of Economic Advisers—and got the Fed involved for a while in a joint policymaking process. It expanded from the Troika to the Quadriad. There have always been questions in my mind—and others’ too—whether or not that involvement was probably closer than it should have been to protect the independence of the Fed, and that Martin might have been better served if we had not gotten involved in that. But

with people like Arthur Okun, James “Jim” Tobin, and Gardner Ackley over there at the council, and Dan very close to them, it was natural that he would push us to do more detailed, longer-range forecasting. I think we went from two to four quarters. At first we did this all by hand. Cortland Peret used to work out the details of these forecasts with a tedious process of working with a hand calculator. Then when Steven S. “Steve” Roach came, I believe you (Larry Slifman) and Steve put together the “little black box” model so we could push a button and not have to recalculate all those things by hand. So it was a natural evolution, but Dan Brill has to be given credit for the stimulus to the process.

MR. SLIFMAN. By the mid-1970s, when you were the division director, was it your idea to have forecast meetings, or had those meetings been around for a while?

MR. GRAMLEY. Those had always existed. The new part that I introduced to the process, which I took with me when I went to the Council of Economic Advisers, was to get as much model involvement in the forecast as possible, because before that it had been all pure judgment. The way I did this was to ask Jerry Enzler to look at the individual equations of the model and try to add-factor them using purely technical judgment on why that equation was going wrong. Rather than exercising technical judgment at the macro level, you do it at the level of each individual equation. Then you come to the forecasting exercise, with a model forecast based on the prescribed assumptions for monetary and fiscal policy, and give us the benefit of that input.

When I went to the CEA, I became the CEA’s chief forecaster, and we used model inputs from a variety of sources. We had the Fed model. We had the DRI model, the BEA model, and the Wharton model. We would have each of those add-factored technically by the individual

specialist using that model and then bring that information to bear on the process of putting together a forecast that gave us as much input from the models as possible.

We also did simulations with these models. Let's say the Wharton model was poor on business fixed investment, and the DRI model was poor on housing. We could get the best inputs from each of the models that way.

MR. SLIFMAN. In the 1970s, when you were running the forecast as the [R&S] division director, how did you determine the appropriate monetary policy assumption for the staff to use in developing this forecast? Was there a rule—hold interest rates where they are—or was it something other than that?

MR. GRAMLEY. It was the suggestion you just made—hold interest rates where they are. But we probably were not anywhere near as specific about that as we should have been.

MR. SMALL. I'm wondering about both the uses and limitations in the following sense. If you start with a two-quarter forecast, as you indicated, there's barely time for the lag between monetary policy and the economy to show. And even as you extend the forecast out and get some real effect, the effects on prices may be more prolonged. So you could show someone a nice recession without any effect on prices. Do you think those were limitations that might have influenced policy—

MR. GRAMLEY. Sure.

MR. SMALL. —that you could show the losses but not the gains?

MR. GRAMLEY. No question. If you look only two quarters ahead, or, indeed, if you look only four quarters ahead, you're not looking far enough down the road to develop a good, solid strategy for monetary policy. That was one of the reasons why monetary policy was so variable. It didn't take a longer-run view.

But you have to think back. That's a long time ago. We know an awful lot more about how the economy works now than we did then. We have technical abilities now that we didn't have then, and much better models. The models at that stage were very unreliable.

MR. SLIFMAN. So if the lags are long and variable, the variable part is the—

MR. GRAMLEY. Yes. It's an integral part of the whole process.

MR. SMALL. When you say you made forecasts two quarters, four quarters, six quarters—were forecasts at those ranges also presented in the Greenbooks and presented to the FOMC?

MR. GRAMLEY. Right.

MR. SMALL. Would they come back with suggestions for different monetary policies?

MR. GRAMLEY. Well, the FOMC would discuss it. And if the FOMC changed interest rates, then we would change our interest rate assumption.

We toyed with using models for longer-range simulations, but not anywhere near in as educated a fashion as it's done today. We were pretty much novices in this business.

### **Views on Inflation in the Mid-1970s**

MR. SMALL. Do you remember the staff's initial response, in the late 1960s, when Edmund "Ed" Phelps and Milton Friedman came out with the natural rate and expectations-augmented Phillips curve?

MR. GRAMLEY. We didn't get up to date anywhere near fast enough. We read the stuff. We knew it existed, but we didn't assimilate it the way we should have. We were still behind the curve in the middle 1970s.

MR. SMALL. And the Vietnam War, the fiscal stimulus—not knowing how much stimulus was in the pipeline in real time was viewed as one of the causes behind inflation

increasing. The Administration or whoever held back on those numbers. Do you remember this?

MR. GRAMLEY. Yes, I do. I remember particularly a dinner party at my house where Charles L. “Charlie” Schultze was present, and I was berating him because the Johnson Administration wouldn’t raise taxes. His comment was, “Well, we couldn’t raise taxes, because you would give aid and comfort to the enemy.” That’s a memory that stands out.

But, no, we didn’t have the numbers we needed. If we had them, I don’t know whether we would have run a tighter monetary policy or not. That was, again, a period in which Chairman Martin, I think, felt political pressure.

I feel personally a sense of responsibility for what did and didn’t happen during that period, and I think the staff as a whole should—the staff existing at that time—we didn’t put as much weight on the inflation problem as we should have. We didn’t follow the literature well enough to get up to speed on the logic of a vertical Phillips curve and what that meant or the expectational aspects that are involved in the dynamics of inflation. We were not giving the FOMC the kind of advice it should have gotten, and so we bear a considerable responsibility for what happened during that period.

MR. SMALL. In the mid-1970s. And during that time you were asked to do a staff study—if the costs and benefits of inflation were, let’s say, 4 percent going to 5 percent, or 3 percent [going] to 4 percent. How might you have written out a taxonomy of the costs and benefits of inflation?

MR. GRAMLEY. It would have been stacked on the wrong side [laughter], no question.

MR. SMALL. Just nominal wage rigidity downward and gave some benefit to inflation?

MR. GRAMLEY. We didn't go quite as far as Sumner Schlichter did, who argued that a little inflation was like a lubricant for the economic system, but we just didn't see its damages. We particularly didn't see that once inflation got under way, it tended to be self-perpetuating because of what it did to expectations.

### **Working at the Council of Economic Advisers**

MR. SMALL. When you went to the Council of Economic Advisers and saw economic policy from within an Administration, were there any large surprises?

MR. SLIFMAN. You had a long-standing friendship prior to 1977 with Charlie Schultze from when you were at Maryland. Is that how you came to go over to the CEA?

MR. GRAMLEY. I met Charlie in 1962 when I went to teach at the University of Maryland. We had a very close friendship. Charlie asked the President to nominate me for the CEA. Otherwise, I wouldn't have gotten there.

Now, what was the big difference? What was the surprise? I suppose one tends to think of the CEA as primarily a macro organization, dealing with macroeconomic policies. Anybody who's been at the CEA for any length of time will tell you that the most important thing the CEA does is to stop bad things from happening. It's just unbelievable the policy recommendations that come from Commerce, from Labor, from Energy, or other departments—all of which are going to have only 0.1 percentage point effect on price inflation, but they will do these wonderful things that blow up the budget, that create inflation, that are wrongheaded from the very beginning. The CEA has to deal with every single one of these. That's the most important thing that the CEA does. I certainly did not realize that when I went over there.

I was primarily involved on the macro side of the CEA, working with the forecasting process and other macro stuff. But even in the macro area you'd get involved in a lot of suggestions—which go to the President—for different programs that shouldn't happen.

MR. SLIFMAN. My understanding from people who still go to the CEA today is that, from 1977 to 2007, it hasn't changed. Much of what they do still is stop bad things from happening.

MR. GRAMLEY. Whenever the Administration turns over, new people come to Washington. They're bright eyed and bushy tailed, and they are absolutely certain that, now that they are here, the world is going to work much better than it ever has before, because they know just what to do. They have all kinds of wild ideas, and they have to be shot down. That's what the CEA does.

MR. SMALL. Can you talk about macro policy under President Carter and under Schultze—how you started out and how policy developed over time?

MR. GRAMLEY. The first thing that was proposed by the Council of Economic Advisers was a \$50 tax rebate. I wasn't wildly enthusiastic about it. I remember one morning Charlie came in and said, "Give me a hard-hitting, bullet-type memo on the principal reasons why we need a \$50 tax rebate." Then, during a session later that day with the President, W. Michael "Mike" Blumenthal persuaded the President not to go forward with the proposal. Charlie came back to me and said, "Now, Lyle, give me a hard-hitting, bullet-point memo on the principal reasons why we don't need a \$50 tax rebate."

If you think about what was going on at that time, the recovery from the recession of 1975 was slow and weak. The unemployment rate at the beginning of 1977 was pretty close to 7 percent, as I remember. The CEA believed that the main thing to be done was to stimulate the

economy, not worry more about inflation. Everybody's estimate of the full-employment unemployment rate at that time was probably in the range of 6 percent or less, maybe even 5 percent, so it was felt that there was plenty of slack in the economy. Inflation going on at that time must therefore not be related to the balance between aggregate demand and supply.

I recall very well that one of the early things we did was to take a hard look at the drop in productivity in 1973 to assess what it meant and to persuade ourselves that it really hadn't happened—that long-run productivity growth was still 2.25 percent or thereabouts instead of the 1.25 percent that it actually was. We had a study done by Peter K. Clark, which came to essentially that conclusion—that this is probably a one-off event, not a significant drop in trend productivity.

We had no idea at that time that, if we had a sudden change in trend productivity, it would also mean a sudden change in the full-employment unemployment rate. I don't think we really understood this process until the middle 1990s, when we had the increase in productivity that temporarily lowered the full-employment unemployment rate.

We were looking at a situation in which it looked as though the inflation problem was not a macro problem. And if it were not a macro problem, it was being caused by things like the holdover effects of the wage and price controls, the impact of the 1973 run-up in oil prices, and the food shortage that we had in 1972. The way to deal with it was some sort of an incomes policy, not with macro policy.

MR. SMALL. And then you got hit with OPEC (Organization of Petroleum Exporting Countries)?

MR. GRAMLEY. Then we had another run-up in inflation in 1979. To this day, I think Charlie Schultze probably still assigns a larger role to things like oil prices than to the balance

between the aggregate demand and supply in the analysis of what was happening to inflation during that period.

MR. SMALL. What about President Carter's credit control initiative?

MR. GRAMLEY. That occurred after Paul A. Volcker decided to introduce the change in the modus operandi of monetary policy. We knew at the CEA that this was going to involve much higher interest rates, and we worried about that.

We knew that there was a law on the books that permitted the President to invoke credit controls. We thought that by imposing credit controls, we could throw sand in the credit-creating machinery and keep the rate of interest lower. We at the CEA were not particularly fond of the new modus operandi of monetary policy. I'm not sure we were terribly enthusiastic about the whole idea of bringing down inflation, but certainly not the modus operandi of policy.

MR. SMALL. Do you have any memories of the switch from G. William Miller to Paul A. Volcker as Chairman of the Fed, from the Administration side?

MR. GRAMLEY. Yes. Miller had been appointed when Burns left as Chairman of the Federal Reserve Board. When Mike Blumenthal left as Secretary of the Treasury, Miller was brought over to be the new Treasury Secretary, so that required a new person at the Fed. Paul Volcker was recommended to the President by Anthony M. "Tony" Solomon, who had known him at the Federal Reserve Bank of New York.

It was obviously in retrospect an excellent recommendation, because I don't think anybody but Paul Volcker could have done what the Fed did then. What the Fed did was probably the most important accomplishment of monetary policy in the modern era. If you look back on it now, there's no question about that.

MR. SLIFMAN. But it wasn't popular with the Carter Administration at the time.

MR. GRAMLEY. No, it wasn't. But Volcker told President Carter that he was going to be independent, and he was going to be tough on inflation. So Carter shouldn't have been shocked. I'm confident that Paul Volcker was probably not the CEA's recommended candidate for the job.

MR. SMALL. The Volcker change was in October 1979, and you were still at the Council. Were you surprised by the action? Was there much coordination or a forewarning?

MR. GRAMLEY. It was a done deal when Paul announced it. He did tell the President and Charlie Schultze what he was going to do before he began it. As a former Federal Reserve staffer, I was sent over to the Fed to negotiate with Paul Volcker to see if he could be talked out of it.

MR. SMALL. How much did you get out of that negotiation?

MR. GRAMLEY. I didn't expect to succeed when I went over, and I didn't. I didn't budge him. He told me that he thought the impact on long-term interest rates would be minimal, that the main impact would be on short-term interest rates. The logic of this argument was certainly correct—that the market would see that the Fed was going to be tough on inflation, and, therefore, long-term interest rates would not go up much. Unfortunately, that didn't turn out to be correct.

MR. SMALL. There's a story that, immediately prior to the October 1979 change, Paul Volcker was in Europe. He went to Yugoslavia—Belgrade, I believe—and got beat up there for inflation in the United States. He came back and, in reaction, instituted [the] new operating procedures. Do you have a sense of the direct planning that he might have done before that or staff studies or staff work about monetary control and how that would happen?

MR. GRAMLEY. My understanding was that Paul Volcker began to push for a change in the modus operandi of monetary policy the day he arrived, that he had this in mind from the very beginning. And staff studies were done at the time to get ahead of the game and to figure out how it would work.

I think, in retrospect, it didn't work anywhere near as well, in a technical sense, as might have been hoped, because we went through really wild fluctuations in money growth and interest rates and the real economy. If you think about it, it's a logical outgrowth of using nonborrowed reserves as a target, given the lags that are involved and the adjustment of money demand and real aggregate demand to interest rates. If you set a path for nonborrowed reserves, since money demand does not adjust immediately, you're going to get an increase in interest rates. And the combined effect of the rising interest rates on both real aggregate demand and a demand for balances other than transactions balances is going to hit later. And when that happens, a rapid reversal of money growth and real economic activity begins. And because long-term interest rates were fluctuating as well as short, the real impact was that much larger.

The modus operandi used at that time was that you adopted a target for nonborrowed reserves, and then, if money growth continued to exceed your expectations, you shrunk that target. That made the fluctuations even larger.

### **Being a Federal Reserve Board Governor during the Volcker Era**

MR. GRAMLEY. I recall going in to see Paul Volcker not long after I came to the Board as a Governor. It may have been early June 1980 or somewhere around there. I had thought about this and realized that we were going through oscillations in money growth, interest rates, and real economic activity, and I said, "These oscillations may not be damped. We better get a staff study done to figure out where we're headed." He agreed to that, and I called in—you

(Larry Slifman) might have been there, I don't know. Jerry Enzler was certainly there. Probably Jim Pierce, if he was still here, and others like that. I asked them to use their best judgment about the magnitude of the lags and the elasticities of demand for money and real economic activity with respect to interest rates and give me their best judgment. They came back a week later and said their best judgment was that these oscillations would be damped, so we would survive. And we did survive. Now, looking back, it was worthwhile having gone through, given the fact that inflation was brought down dramatically.

Why did the Fed adopt this new modus operandi, instead of simply continuing to target interest rates and raising them to the level needed to get the job done? It's my strong sense that Paul Volcker believed that the political process would not permit the Fed to take responsibility for pushing interest rates as high as they had to go, and that this was the only way out. He never told me that explicitly. I never asked him. I didn't want to hear the answer, I guess.

Sometime between May 1980 and August 1982, I was asked to give a talk at the Brookings Institution about the modus operandi of monetary policy at the dinner held following the Brookings panels on economic activity. After I finished my talk, Jim Tobin ripped me up one side and down the other. He said, "This is nothing but a façade, and you know it!" What could I say? It could have been done differently—the Fed could have simply continued to follow its practice of using a money market variable like net borrowed reserves or the federal funds rate as its instrument variable—and probably the process would have been considerably smoother. [It] wouldn't have been smooth but might have been somewhat smoother. But it would have required the Fed to say, "Yes, we raised interest rates deliberately to bring down inflation," and that probably would not have been politically feasible.

While I was still here at the Fed as director of the Division of Research and Statistics, Jim Pierce and Tommy Thomson did a paper on monetary control. They concluded that one could control the stock of money over longer periods, like six months or a year, every bit as well by setting interest rates as by setting the growth of nonborrowed reserves, that they would get roughly comparable results. I was told that that study was updated before Paul Volcker introduced a new modus operandi of monetary policy. I think if people had thought about it, they would have concluded that you could get the job done without this change in the choice of instrument variables. This convinces me that Paul Volcker was right, that the reason you had to make the change was that it would be politically impossible to just take “credit” for raising interest rates as high as necessary to get the job done.

MR. SLIFMAN. Some people would have argued that the important thing was the announcement effect. You said that expectations are important for the inflation dynamics. Do you think that part of the reasoning was to have a pronounced announcement effect that might quickly alter inflation expectations?

MR. GRAMLEY. Possibly, but it didn't work, and I have two reasons for thinking so. One is that if the announcement effect had been large, we would have had relatively little increase in long-term interest rates. The second thing is, when I came back to the Board in 1980, what I saw was a sea change in attitudes at the Fed about inflation. I had left an institution that was fairly casual about inflation. I came back to an institution that was absolutely determined to bring inflation under control. I felt it was my obligation as a Governor to give the public this message in no uncertain terms. So I made a lot of speeches, and in every speech I would lay out this scenario—this is the target for money growth that we're going to tolerate. If you look at

history, this says that nominal GDP can only grow so fast. And with price inflation at x level, it means that real growth is going to have to come down until inflation breaks.

After giving a talk, in the Q&A I would say, "I'd like to ask this business community a couple of questions. How many of you are making your investment plans on the assumption that inflation over the next five years will be 10 percent or higher?" Half of the hands would go up. I would say, "How many of you are assuming that, for the next five years, the inflation rate will be 5 percent or above?" All hands would go up.

Then I would say to these people, "You haven't listened to me. You've heard nothing of what I have said, or at least you don't believe it. Why? What's wrong?" And they would say, "Arthur Burns was fighting inflation all the time he was there. Before him, William McChesney Martin was the great inflation fighter. But none of them had the guts to really do the job, and you guys will chicken out too."

That persisted until the fall of 1981. At that time, when I went out to make speeches, people were listening. It took the shock of a serious recession before they began to realize that the Fed meant business. We weren't going to back down.

MR. SMALL. You mentioned the choice to target money rather than interest rates as partly advantageous along the lines of dealing with the Congress. What issues do you think Volcker had with Board members and Federal Reserve Bank presidents? Did the same logic apply?

MR. GRAMLEY. I don't think he had any trouble convincing his Board or the members of the FOMC that this was the way to go. There was sufficient concern about inflation and sufficient lack of technical knowledge about how monetary policy worked to interpose any major objections.

MR. SMALL. When you went to the CEA in 1977, you left the Board as a division director. Do you have any stories about the culture of working at the Board, working with Governors?

MR. GRAMLEY. One of the things that a division director always has to worry about is that Governors like to use resources. I recall one story of a Governor—whose name I will leave unmentioned—who arrived at the Board without much knowledge of the macro economy but with a lot of brains. He was a very bright guy, and so he was shedding off sparks all the time. He had ideas for all sorts of things. I finally got him to put his requests for information and studies through me rather than directly to the staff economists. But the amount of stuff he was requesting got to be rather burdensome, so I thought I better try to slow him down somewhat.

The ideal situation came up when he called one day and suggested I do an investigation of felt production, because it was going to be, he thought, the leading indicator that would tell us all we needed to know about where the economy was going. I figured that this was going to be a waste of time, because if Arthur Burns and Wesley Mitchell hadn't included felt production in their list of economic indicators, it was probably because it wasn't a very good one. But I assigned the project to one of our staff economists, and I asked this person to keep track of the hours that she spent on the project, including the amount of time and resources at the computer that she used up. Then I made an estimate of the dollar cost of this thing and sent it to the Governor afterward with a note saying, "As I expected, this research project turned out to be useless. But it cost us a lot of money, and I hope in the future that you would let me make a decision as to whether I should go ahead with these requests of yours or not." I could have been getting myself into real trouble. However, because this Governor was a gentleman as well as a bright guy, he gained respect for me for having stood up to him, and we became good friends.

MR. SMALL. When you came back to the Board in 1980, were you on the receiving end of any division directors and any responses like that?

MR. GRAMLEY. No. I was aware of the problems that division directors faced in this respect, so I was circumspect in my efforts to lean on the staff without going through the division director.

MR. SMALL. As an economist here when I first entered, I would sit in the back of the Board Room during briefings. To find out what was going on, I'd talk to staff that did the briefings. They noted that Lyle Gramley was a guy you had to keep an eye on, because he had come up through the ranks and he knew where the skeletons were buried and how the data were put together. So you were viewed as a Governor you had to be careful of.

MR. GRAMLEY. Well, later on there was a Governor who tried to get involved in the forecasting process and was thoroughly rebuffed by the staff, because the forecast process has always been one which the staff needs to keep independent from Board members, including the Chairman, so that no one can say that the Chairman or any other Governor is dictating what the staff should do. I was well aware of that. And while I would grill the staffers in considerable detail about where they were coming from, I knew that the forecasting process had to remain an independent staff input.

MR. SMALL. I remember on the staff forecast we would certainly pass on to the Governors the output, the inflation rates, the economic variables. But the federal funds rate, the monetary policy assumption, was not passed on.<sup>1</sup> And there were stories that the Governors

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<sup>1</sup> Editor's note: The Greenbook provided a general description of the monetary policy assumptions underlying the staff economic forecast in terms of the growth of the monetary aggregates and the expected path for market interest rates. Beginning in 1992, the description included an expected path for the federal funds rate.

would bring that into their arguments one way or the other. Do you remember the genesis of that?

MR. GRAMLEY. No, I don't, but it certainly should have been passed on. Staff should have been entirely open on what their monetary policy assumptions were. If we weren't, that's so much the worse for us.

MR. SMALL. When you came back to the Board as a Governor in 1980, that was three months or so after Paul Volcker's October 6, 1979, announcement.

MR. GRAMLEY. Six months. It was in May 1980.

MR. SMALL. At that time, where was the economy, and where were interest rates? What did it feel like to sit down almost midstream and start taking responsibility for this?

MR. GRAMLEY. By May 1980 we were on the downside of the interest rate move. Interest rates had peaked in March and were heading down big time. Money supply growth had peaked in March or February, somewhere around there on a year-over-year basis. It too was heading down. The FOMC's discussion was whether or not the target for nonborrowed reserves should be increased to bring the growth rate of money up and push interest rates down further. I began to worry that something was going wrong in the process of conducting monetary policy, that by selecting a target variable like nonborrowed reserves and not taking into account the lags and the adjustment of money demand and the real economy to changes in interest rates, we were in a process of getting into oscillations of changes in growth of money, interest rates, and the real economy.

I went in to see Paul Volcker about it. He listened to me sympathetically. The end result was that we put into effect a staff study with some of our best resources, and they came to the

conclusion that, while there were oscillations, they were likely to be damped—at least the world wasn't going to blow up.

MR. SMALL. That must have been a little nerve-racking before you got the study back.

MR. GRAMLEY. I was concerned. I continued to be concerned even after the study, because if you look back at that period—I don't recall what month it was that interest rates hit bottom, it was probably somewhere around June or July—by then we had increased our target for nonborrowed reserves to a point where the economy had started to grow again very rapidly. Demand for money began to move up because of the previous fall in interest rates. We soon found ourselves in a situation in which money growth was very rapid indeed, and we had to start going in the other direction.

My first thought in May 1980—and I expressed it at the FOMC meeting then—was that if the right interest rate on federal funds in March had been 17 percent, why was 10 percent too high now? Could the economy possibly have changed that much? But it was an integral part of the strategy of using this monetary aggregate target as an instrument variable. So we continued to pursue that until August 1982.

MR. SMALL. When you got the study back, you must have been relieved. What was Chairman Volcker's view of the study?

MR. GRAMLEY. I think he had anticipated it would come out favorably. It wasn't something that was written up. It was something that was provided to me orally.

MR. SMALL. But he had a sense that he was taking some risks on this?

MR. GRAMLEY. I think he understood that he was, yes. But I think he also understood that the inflation problem was so serious that risks had to be taken.

MR. SMALL. What was your sense of what he was going through mentally and emotionally at that time—with uncertainty, with rising unemployment, with political pressures, how much strain and stress he was under?

MR. GRAMLEY. If he was undergoing strain and stress, he didn't show it. Paul Volcker is a very tough guy. He knew he was going to face a lot of political heat for doing this, and he was prepared for it. He was the right man in the job.

MR. SMALL. Were there concerns that political or public support would wane before you got inflation down?

MR. GRAMLEY. There was a lot of public criticism. Paul Volcker was criticized extensively by the Secretary of the Treasury, Donald T. "Don" Regan, and by then-chairman of the Council of Economic Advisers, Beryl Sprinkel. But I heard Paul Volcker say many times that if it had not been for the firm support of President Ronald W. Reagan, the Fed could not have continued on that course. He had the President's backing. He talked to the President, who said, "Look, you do what you have to do."

MR. SLIFMAN. What about the other members of the Board and the Committee as we move through 1981 and we're getting these oscillations in the interest rates and the economy starts to slide again by 1981 and 1982? Was the Board starting to become concerned about whether or not this was the right strategy?

MR. GRAMLEY. If they did, they didn't express it. All of them had been there and had acquiesced on the adoption of this strategy, so none of them, I think, felt free to back off from it. I was one that talked about it more or less constantly. I probably made a nuisance of myself—not about the overall strategy of monetary policy, but the way of implementing it. It wasn't until August 1982 that everybody began to realize that something had to be done.

MR. SLIFMAN. What happened in August 1982?

MR. GRAMLEY. The FOMC meeting was one that I never will forget.<sup>2</sup> Paul Volcker's traditional mode of operation was not to set forth his views on where the economy was going or where monetary policy should go, but to listen to everybody else's views and then form a consensus. But at that meeting, he opened the meeting by saying, "I'd like to take the floor and give you a little tour of the horizon of what's going on in our economy and around the world." He began to talk about our economy and said, "We expected a turnaround in GDP growth in the second quarter. We didn't get it. And then we thought it would be postponed to the third quarter, and it's pretty clear we're not getting it in the third quarter as well." And he began to talk about Europe and Japan. Then he switched to Latin America and talked about the debt problems that were developing there. He said, "Look, the bottom line is, we can't go on the way we're going. The world is going to fall apart if we do. We're going to have to start providing enough stimulus to the U.S. economy to get it turned around and lead the world economy out of this awful situation it's in now, and that's going to mean dropping the monetary strategy that we've been using since October 1979 and going back to the old way of doing things."

There wasn't a word of disagreement anywhere around the table, because everybody recognized that we had been through a traumatic period. Inflation had come down a long ways. We were in a position now to have gained a certain amount of credibility in the fight against inflation, and given the oscillations that had taken place, everybody was content with going back to the old way of doing things.

MR. SLIFMAN. Had any groundwork been laid for this by Volcker before that?

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<sup>2</sup> Editor's note: In the fall of 1982, the efficacy of the new operating procedures was being undermined by the increased instability of M1. Mr. Gramley's recollections are of the FOMC meeting on October 5, 1982, when the Committee dropped M1 from the operational paragraph of the domestic policy directive.

MR. GRAMLEY. No, none.

MR. SLIFMAN. At the preceding FOMC meeting, had there been any hint of this?

MR. GRAMLEY. No. At the preceding FOMC meeting, which probably would have been sometime in late June, early July, we were still hoping for that third-quarter upturn that didn't materialize.<sup>3</sup> So it came right out of the blue.

MR. SLIFMAN. So, somewhere between the two meetings he just decided that something had to be done?

MR. GRAMLEY. I think the problems were weighing on him for longer than that. But when we didn't get the upturn in GDP growth in the third quarter that we had hoped for, it became obvious that we had to do something at the Fed.

MR. SLIFMAN. So you switched to, essentially, interest rate targeting.

MR. GRAMLEY. Right.

MR. SLIFMAN. What decision rule was to be used to determine the right interest rate?

MR. GRAMLEY. I don't know that we thought things through as clearly then as has been done since. It was playing more or less by the seat of our pants from one meeting to the next. But it was obvious at that point that the economy needed a lot of monetary stimulus. So, directionally, it wasn't hard to figure out where to go.

MR. SMALL. Was the distinction between real and nominal interest rates and setting policy in real terms pretty clear by then?

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<sup>3</sup> Editor's note: Mr. Gramley attended the FOMC meeting on June 30–July 1, 1982, but was not available for the Conference Call on July 15, 1982 or the FOMC meeting on August 24, 1982. However, the record indicates that he associated himself with the Committee's actions at the July Conference Call with respect to setting ranges for the monetary aggregates in 1982 and 1983. At the August FOMC meeting, the Committee indicated that it was tentatively planning to continue those ranges for 1983.

MR. GRAMLEY. No, it wasn't—still wasn't by then. That really wasn't faced until John Taylor published his Taylor rule, and people began to think about real interest rates in a more serious way. It's obvious, looking back, that we were making a terrible mistake. Why this wasn't obvious to us then I don't know, but it wasn't.

MR. SMALL. Were you involved in the Latin American debt crisis?

MR. GRAMLEY. The only involvement I had was when the governor of the central bank and the finance minister of the country of Colombia came to see me and asked me what I could do to help them out of their developing debt problem. I said, "I can do just one thing for you, and that's introduce you to Paul Volcker" [laughter], and that I did. Later on they brought me to Colombia and gave me a presidential medal for my helpfulness. And all I had to do was to walk them into Paul Volcker's office.

MR. SMALL. So you had inflation under control. Do you remember some of the other policy issues?

MR. GRAMLEY. If you go beyond 1982, the first decision that had to be made, once the economy began to recover, was how fast we would switch back to a tightening monetary policy. Had we waited until we got back to full employment, we would have been in big trouble, indeed, because we would have been repeating mistakes that had been made previously. I recall that the first decision to begin tightening monetary policy was done at one of the early meetings, probably the May 1983 meeting when the unemployment rate was still in excess of 10 percent. That was a pretty gutsy decision.

MR. SLIFMAN. What was the thinking that led people to decide we've got to start doing something about interest rates, even with unemployment rates so high?

MR. GRAMLEY. Inflation was still fairly high then, and GDP growth was very rapid indeed. During the second quarter of 1983, we were looking at a growth rate on the order of 8 to 9 percent in real terms. That's clearly well above the economy's long-term growth potential. If you want a smooth transition of getting the economy back to potential and then growing at potential, you need to start before you get to the top. It wasn't a particularly controversial decision as I recall.

MR. SLIFMAN. Was that one of the first times that the Committee had ever acted so preemptively?

MR. GRAMLEY. That far in advance, yes. Before that time, no one would have dreamed of beginning to raise interest rates when the unemployment rate was close to 10 percent. If you look back at the history of policy, I can recall cases in which monetary policy began to move towards tightening shortly after the trough of recession. That was the case, for example, in 1958, but not with the unemployment rate at that elevated level.

MR. SLIFMAN. Even with the unemployment rate at 10 percent, the Committee judged the risks to be weighted predominantly towards inflation?

MR. GRAMLEY. No, I'd put it a different way. I think there was an acute realization at that point—that to sustain the credibility that the Fed had gained by that very tough period from October 1979 to August 1982, policy had to be different on this upswing. It had to demonstrate early on that it was going to keep control of inflation. I think that was the prevailing sentiment.

MR. SMALL. When did you notice this expectation of the markets or the public in general that the Fed wouldn't back off too soon? When did you become convinced that you had won the major war on expectations?

MR. GRAMLEY. In a formal sense, we didn't talk much about expectations the way it's done today. We had no measures. For example, there were no inflation-protected securities (TIPS) out there. But I personally became conscious of it in the responses to the speeches I gave, which I mentioned earlier. Audience responses at the end of 1981 were totally different than audience responses in 1980. People realized that the Fed had been serious, that we were going to get inflation down. And, in my view, it became extremely important not to go through this wrenching of the economy yet a second time. It was important to keep the inflationary process under control and not let it start getting revved up again.

MR. SMALL. And long-term interest rates could have been one indicator?

MR. GRAMLEY. Sure.

MR. SMALL. When you left the Board in 1985, inflation was pretty much under control.

MR. GRAMLEY. Pretty much under control. It wasn't as low as it is now, but by the standards of that time, it was much improved from what it had been.

MR. SMALL. Did you directly interact with the staff or with the modeling effort as a Governor? As Governor, how did you feel supported by the staff and the research effort?

MR. GRAMLEY. I knew nearly everybody in the research divisions—both on the international side and the domestic side—personally. I had no trouble at all getting any help I wanted. The staff to me was always extremely helpful.

MR. SMALL. James L. "Jim" Kichline was the division director in Research and Statistics.

MR. GRAMLEY. Yes. Jim had been my graduate student in money and banking at the University of Maryland. I knew him well. Jim was on about a three-month sabbatical when I

first got here, and we missed his talent in forecasting. I was not at all happy with the staff forecasting process at the time because it wasn't in Jim's good hands.

MR. SLIFMAN. One of the stylized facts of economics is that the Great Moderation supposedly occurred beginning around 1982—the reduced volatility of GDP and all these other real-side variables happened about the time that monetary policy switched over to interest rate targeting. Was an attempt to moderate fluctuations in GDP part of the thinking in 1982? To what extent do you think the switch to interest rate targeting is responsible for the moderation in fluctuations of GDP?

MR. GRAMLEY. I don't think that was a central part of the thinking in the Fed when policy changed course in 1979. I think it was simply that inflation was going to create great damage—was creating great damage to the economy and would create more if it persisted. Looking back, I think everybody recognizes that there were some other factors than the achievement of price stability involved in the Great Moderation—better inventory controls, a more open economy, and a tendency for economic growth abroad not to be necessarily synchronous with ours. So we got some feedback that was offsetting to cyclical variations here. But if you asked me to put a percentage contribution that came from monetary policy to that Great Moderation, I would say it's probably 75 percent of the story.

MR. SLIFMAN. I would say that that's an important achievement.

MR. GRAMLEY. I would say so, too. And I mean by "75 percent of the story," not just that stable inflation, through its influence on private expectations, leads to the greater moderation, but because you don't have inflation, you don't have the wild swings in monetary policy, which tend to create the variations in inflation that we had back then and the variations in real activity. If you have a world in which inflation is going up and down and up and down,

you'd have to be a genius to run monetary policy in a way that avoided creating recessions periodically.

MR. SLIFMAN. What was it like for you, in a sociological sense, to be a Board member versus being a division director? When you're sitting on the second floor as a Governor, you don't have the same kinds of interaction with the staff on an hourly basis that you do when you're the division director. Does it feel more isolated?

MR. GRAMLEY. I think this depends on the individual Governor. A Governor who had no contact with the staff before might feel reluctant to call on the staff, and he might see the staff only in the context of meetings when the staff is giving advice. I felt free to talk to staff regularly. The only difference for me was, I was the one that said "yes" or "no" to policy changes rather than thinking up what they had to be and advising people on what they had to be. So I didn't feel all that different.

I think my friend Laurence H. "Larry" Meyer, when he came here, found himself in much the same position. He hadn't been a staff member, but as a Governor, he had close contact with the staff. And so, he felt quite [as] at home with the staff as I did.

MR. SMALL. But what about the other Board members that served with you?

MR. GRAMLEY. I remember one Board member in particular who constantly fought with the staff. And that, I think, was this Governor's fault, not the fault of the staff. So it can happen.

MR. SMALL. If you were to think about selecting Governors, who makes a good Governor?

MR. GRAMLEY. I think monetary policy has become sufficiently complex today so that you have to have the bulk of the Board consisting of professionally trained economists in the

macro field. You need to have a Ben S. Bernanke, a Donald L. “Don” Kohn, and a Frederic S. “Rick” Mishkin to help run monetary policy the way it needs to be run.

I do think it helps to have talent outside that area. For example, Susan S. Bies has brought a great deal to the Board from her knowledge of financial markets and bank regulation. That’s a talent, I think, is going to be needed in the future. The Board will sorely miss Susan if they can’t find a good person much like her to replace her. Somebody that comes from the banking community, that has a sense of how banks work, somebody who comes from Wall Street that has a sense of how Wall Street works, a businessman—there’s room for talent like that at the Board.

It shouldn’t be all macroeconomists who run models. There should be other inputs as well. There should be some balance. But it has to be professionally led, with a Chairman and a couple of others, at least, that are intimately informed about macroeconomics, what it has to offer in the formation of monetary policy decisions.

### **The Role of the Fed in Supervision and Regulation**

MR. SMALL. The issue comes up every once in a while of whether the monetary policy function and the supervision and regulation function need to be in the same agency or whether they should be separate. What are your views on that?

MR. GRAMLEY. I have a traditional Federal Reserve view on that. I think they ought to be integrated as they are now. I think knowledge and an ability to affect what’s going on in the banking system through regulatory and supervisory tools can be a good adjunct of monetary policy, and the central bank needs to have strong regulatory and supervisory responsibilities, given its role as a lender of last resort. That’s why a person like Susan Bies can be so valuable.

MR. SMALL. Banking supervision and regulation have gone into capital standards and international BIS (Bank for International Settlements) standards. Do you have reflections on those developments?

MR. GRAMLEY. I think they're going in directions that are necessary, given the way the world is developing. It does require additional talent in that area not just at the Board level, but at the staff level, particularly, as well. So having a person that is skilled in these areas is vitally important at the Board level.

### **September 11, 2001, and Other External Shocks**

MR. SMALL. The terrorist attacks on 9/11 were a huge event, and people inside the Board saw issues of the ability of banks to make payments and settlements. From the outside, do you remember where you were and some of the reactions?

MR. GRAMLEY. I felt that we were in good hands at the Fed. I knew the staff would be ready for whatever needed to be done.

If you look at the macro effects of 9/11, they are minimal. Recall that the first quarter of recovery from the recession of 2001 was the fourth quarter of 2001. Recall also that the month of October was a month in which consumer spending boomed. Recall also that in six weeks we recovered all the losses in the stock market. As a macro event, you'd never find 9/11 in the numbers if you didn't look at weekly data.

MR. SMALL. But as a former Fed staffer and Governor, you knew that there were a lot of micro issues.

MR. GRAMLEY. Oh, yes. I was well aware of the fact that there would be payments problems and that the Fed would have to inject liquidity on a massive basis. But I was also well

aware that the Fed knew how to do this and would work without much difficulty in meeting whatever problem of that kind developed.

My problem with thinking about 9/11 was not knowing how the consumer would respond. If consumers had decided that the world had suddenly become very risky and they weren't going to go out to the grocery store except when they needed to, we were going to suffer badly.

I sat down with one of my fairly wealthy friends shortly after that and was explaining to him about why this concern was in my mind. He listened to me, and he said, "Well, Lyle, I'll tell you how I responded." He said, "All my life I've wanted a Bentley, but I always thought it would be too extravagant an expense. After 9/11, I thought, the hell with it, I'm going to buy a Bentley."

MR. SMALL. The stock market crash early on under Greenspan was seen as a defining moment for him and his stewardship and ability to respond.

MR. GRAMLEY. What was particularly impressive was the fact that when he first arrived, he had gotten the staff to undertake studies of particular types of crises that might develop and what the action plan would be for dealing with them. So when that crisis hit in October 1987 and Greenspan was off premises, the Vice Chairman, Manuel H. "Manley" Johnson, could literally pick the volume off the shelf, open it up, and say, "Here's what we're going to start to do." Now, that is really preparation.

MR. SMALL. Did Governors consider regulatory changes or other things to strengthen the system to take external shocks?

MR. GRAMLEY. There were shocks. Penn Central, for example, early in the Burns era. That Chicago bank, Continental Illinois, failed in the early 1980s. The Hunt brothers, that

occurred during the Volcker years. That's another one. There wasn't a lot, except what was done in a section that Sam Chase was dealing with. They were doing studies on how to help insulate the system from financial crises, but there wasn't any action going forward. We didn't do much by way of suggesting that the Congress change the law or that sort of thing.

### **Fed Work with Other Agencies**

MR. SMALL. When you were here, how did the Fed work with its sister financial regulatory institutions? Were they rivalrous?

MR. GRAMLEY. To some degree. The regulatory area has been one in which people have carved out their turf. But I imagine they've learned to work together better in the subsequent years than they did when I was here.

MR. SMALL. Although the Fed has some regulatory responsibilities for member banks, do you think it's good that it doesn't cover all banks—that there are other regulatory institutions to do battle with?

MR. GRAMLEY. Doesn't hurt. The OTS (Office of Thrift Supervision), for example, seems to have a better understanding, I think, of how mortgage markets work than the FDIC (Federal Deposit Insurance Corporation) does and perhaps what people here at the Fed do.

### **Closing Discussion about Federal Reserve Chairmen, Communications, and the Board in General**

MR. SMALL. Going back to the Great Moderation and Volcker's moves, are there any unsung heroes that you would point to where he got support—on the Hill, the Administration, on the Board? Was he getting support internationally from other central bankers?

MR. GRAMLEY. Well, he certainly had the Board and the FOMC behind him. To the best of my recollection, there wasn't anybody who argued seriously that the Fed shouldn't

continue to follow a tough monetary policy to get inflation under control. I mentioned earlier that he had the support of the President. That was terribly important. And Paul Volcker was a very tough guy. He wasn't one that somebody needed to prop up. He stood on his two hind legs pretty easily.

I'm sure he was getting support internationally from other central bankers, but he didn't talk to me much about that, so I don't have any personal, firsthand knowledge.

MR. SMALL. In more mundane or normal circumstances, how would you discuss his governance behavior, maybe compared with Martin or Burns or other people you saw?

MR. GRAMLEY. Well, Paul Volcker was probably easier to work with than was Arthur Burns if you were a policymaker. Burns was quite sure he knew where things ought to go and didn't tolerate dissent on the FOMC. Paul Volcker was much more willing to listen to people and try to develop a consensus within a committee.

People have often asked me to compare Paul Volcker with Alan Greenspan. Which of the two of them, they ask, was the best Chairman? My answer has always been that each guy was the right person for the conditions of his time. Whether Alan Greenspan could have ever done what Paul Volcker did in 1979, I'm not sure, because he's not that type. And I'm sure Paul Volcker could never have operated the Fed with the finesse that Alan Greenspan did from 1987 until 2006. They were both perfectly suited to the conditions that prevailed at the time. Those two guys have to be considered the two greatest central bankers we've ever had. Alan (S.) Blinder, who was not a particularly good friend of Alan Greenspan's, said in a paper given at Jackson Hole a year or so ago that Alan Greenspan has a legitimate claim to be called the greatest central banker that ever lived.

MR. SMALL. And Bernanke has tough shoes to fill?

MR. GRAMLEY. He does, yes, but he doesn't worry about that in the least. That is another very self-confident guy—one of the leading scholars in the world in the field of monetary policy and with considerable experience as a Governor before he took the chairmanship. I don't think he feels inadequate by any means.

MR. SMALL. What about the Chairmen and their dealings with the Congress? How adept were they at it?

MR. GRAMLEY. The Chairman has to make an awful lot of public appearances. He has to represent the Fed—testifying before the Congress, making individual contacts with congresspersons. But between speeches and testimonies, the public appearances are enormously burdensome.

We've never had a Chairman quite like Ben Bernanke before, who's as open and forthwith in his presentations to the point where markets haven't known how to interpret Ben Bernanke. They were so used to looking through the curling smoke that Arthur Burns's pipe used to put out or Alan Greenspan's rather convoluted prose, trying to figure out what they meant. Bernanke says exactly what he means, and financial markets have had a hard time getting adjusted to this. I think they're learning in the process, though.

MR. SMALL. What do you think we've learned over the last couple of decades about how we are communicating with the financial markets?

MR. GRAMLEY. Let me first say that the Fed was sort of dragged kicking and screaming into the view that good communication was a desirable thing. It was partly a theoretical change in the approach to how monetary policy worked.

The idea once was that the way you got the most effective impact on the real economy was to surprise the markets, whereas today the idea is that what you try to do is communicate as

effectively as possible where monetary policy is likely to go, which will help markets set yields and prices of assets efficiently and therefore assist you in the conduct of monetary policy. So there's been a 180-degree reversal. The Fed was sort of dragged into the realization of this in part through academic research, but also in part from the insistence by the Congress that the Fed had to be more open, starting with a congressional resolution about 1974, when Senator William Proxmire was head of the Banking Committee and the Fed had to begin making reports regularly on monetary policy. Both congressional insistence and the changes in the theory of how monetary policy worked effected a sea change in communications policy at the Fed between what it is now and what it was when I was here.

MR. SMALL. Do you think the markets and their development played a role? Do you think that, because markets are much more developed now, it's easier for the Fed to see itself reflected in markets?

MR. GRAMLEY. I think the Fed has learned how to read markets. I think markets are behaving differently, and we have a lot more market information than we once had. So the Fed is reading information from markets that it once didn't have.

MR. SMALL. When was the Fed ahead of the curve in inflation and in communications?

MR. GRAMLEY. [Laughter] In looking back, it's pretty clear that we were running pretty lousy monetary policies in the 1950s, 1960s, and 1970s. I know as a staff member here—therefore, in some significant way, responsible for that—I've thought about that a lot, and it doesn't make me proud of my contribution at the time. I recognize that, to some degree, this was conventional wisdom that I shared, but it was bad judgment.

MR. SMALL. At least you got your timing right, with your great success in bringing inflation down—ending on a high note.

MR. GRAMLEY. [Laughter] Right.

MR. SMALL. You have worked at the Fed, at the Council [of Economic Advisers], in the private sector, and you've taught. For the public who thinks all bureaucracies are the same, is there a model or [an] analogy you could make between the Fed and some other institution?

MR. GRAMLEY. The first thing that would strike me is the fact that this is an institution that is intellectually alive. I felt it every day I was here as a staff member, every day I was here as a Governor. That's certainly true of the Council of Economic Advisers as well. But you find very few institutions that have the kind of freedom that people here at the Fed have to conduct research and let their research lead them to whatever conclusions it does. It's a great institution in this respect. There's a lot more intellectual interchange of views here than in many academic institutions. In many academic institutions, each individual has his own little isolated place in which he operates. He doesn't talk much to his colleagues. His colleagues often have different interests in their one area of economics, and he's in another, whereas you have this large group of people here at the Fed, all of whom are interested in macroeconomic policy, and particularly monetary policy. So the intellectual interchange is tremendously stimulating.

MR. SLIFMAN. As the manager of a division, did you promote cooperation rather than competition among staff members?

MR. GRAMLEY. It was here before I arrived. My first position out of graduate school was in a comparable kind of environment at the Federal Reserve Bank of Kansas City. So, to me, it seemed like the most normal thing in the whole world, not something I had to promote.

MR. SLIFMAN. As division director, were there things that you tried to do to ensure that the culture remained a culture of cooperation?

MR. GRAMLEY. Only to the extent of exercising the responsibilities that Dan Brill gave me. He told me that, when I first came here, he wanted me to do what he called the “mother hen job,” which was to look at the work of all the bright, young, highly analytic economists, many of them econometrically oriented—look at what they were doing, make sure that the work got seen around the division and elsewhere, and, to the extent that it was usable for monetary policy, that it was kicked upstairs.

MR. SLIFMAN. How would you answer a critic that says you waste too many resources at the Fed conducting research?

MR. GRAMLEY. I think having the best research institution in the world is the appropriate thing for a central bank in a country as big as the United States. And that means having people following their own interests. They will be around when you need them. Many of them will come up with very interesting studies.

If you look at the way monetary policy is conducted today relative to what it was when I was here 25 years ago, it’s a totally different world. The only reason for it is that we’ve had this stimulating group of young, bright economists doing research in the area of monetary policy. So it certainly hasn’t been a waste of money, by any means.

MR. SMALL. If you are interested in a job in public service, is the Board a good place to work?

MR. GRAMLEY. It’s not only a matter of doing public service. I think any young researcher coming into the field of monetary policy would find more intellectual stimulation here than any institution in the world. It’s an exciting environment, and all one has to do, if you’re an economist, is to look at the working paper series that have been put on the Board’s webpage and you know there’s some really active research going on here. A person coming out of graduate

school that didn't want to be in this environment would have to be unfamiliar with it, because it's a tremendously great place to work.

MR. SMALL. Do you see areas that are not fruitful for research or development?

MR. GRAMLEY. If you had asked me that question in 1985, the year I left, about the things that were being done—for example, trying to read inflation expectations out of the spread between TIPS and regular Treasury issues—I would have been dumbfounded. There are things that are going on now that we were utterly unaware of, even as possibilities. And, again, it's made possible by having an environment in which really good academic-type research can go on.

MR. SMALL. Have you had much interaction with other central banks?

MR. GRAMLEY. Not since I left the Fed. I've been busy making a living in the private sector.

MR. SMALL. And you read our working papers, then.

MR. GRAMLEY. I would say I read every one of them that I can. My analytic economics was learned in the early 1950s, and the economics that you learned in the early 1950s does not give you the talent to read a large number of the papers that are in the working paper series. You might be able to read the abstract, but not much more.

MR. SMALL. But you'll be able to listen to oral history interviews for years to come.

MR. GRAMLEY. [Laughter] Yes, indeed.

MR. SMALL. That concludes our interview. It's been wonderful. You've been very gracious and informative. Thank you very much.