National Center for Atmospheric Research
University Corporation for Atmospheric Research

ORAL HISTORY PROJECT

Interview of: Douglas K. Lilly
8 August 1988

Interviewer: Nancy Gauss

File 1
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Interviewer: —interviewing Doug Lilly. The date is August 8th, 1988, and we're in my office at 55th and Arapahoe, and the time is about 1:30. Doug, could you briefly talk about your education before coming to NCAR, starting with your undergraduate training?

Lilly: I did my undergraduate work at Stanford in physics, and even at that time I was interested in going into meteorology at some point, but the circumstances weren't favorable for doing so. I had a good Navy ROTC scholarship to Stanford, and at the time, it seemed that physics was a good background for that, and still is. So I got my B.S. degree in physics and then I spent three years in the Navy before going to graduate school. And then went to graduate school at Florida State in Tallahassee, which was only a few years after the department there had been established. And that was—let's see, graduate school was from 1953 to '58, about, with a one-year break that I spent in Germany working for Radio Free Europe.

Interviewer: That sounds interesting.

Lilly: We were actually flying balloons with propaganda into Eastern Europe, and I was doing a little meteorological forecasting and R&D. It was very interesting.

Interviewer: Was this during the Second World War?

Lilly: No, this was in the early Cold War era. Actually, the program ended, that particular program ended at the time of the Hungarian revolution, which was 1956, and I went home a few months after that the went back to graduate school.

Interviewer: Were you in the service at that time?

Lilly: No. That was—I had been in the military for three years, from '50 to '53.

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Interviewer: It might be helpful for the files to have a copy of your cv.

Lilly: Yeah, sure. There's probably an old one around in the office here some place, which wouldn't be any different in those respects.

Interviewer: How did you first learn about NCAR?

Lilly: Well, I remember my professor at Florida State, Seymour [L.] Hess, talking about the plan to have such a thing, that was before NCAR existed. So that must have been in the mid-'50s somewhere. It sounded pretty interesting, but that was not—I think it had not been established at the time I finished my degree work, and I had a good job offer from Joe [Joseph] Smagorinsky, who was the director of a research laboratory in the U.S. Weather Bureau, which was in Washington, and I went to work up there, and it was a good job. I stayed there five years. But in the fourth year, I came to NCAR for a visit, and I don't know, I'd have to look up the dates, I'm not sure if it was '62-'63 or '63-'64, somewhere in there. I'd kind of always wanted to move back to the West anyway, it seemed more comfortable somewhere.

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So then I went back to Washington for a year and came back here permanently in either '64 or '65.

Interviewer: What was your position when you first came here?

Lilly: Well, scientific positions were kind of ill-defined. [laughs] I think they were all listed as "scientific staff" or something like that. There wasn't any well-defined hierarchy except for a few directors. Actually, one of the reasons I did—I was thinking about this and I wrote down a few notes before I came—one thing that contributed to my coming here, more or less permanently, was the Kennedy assassination, and that would nail the dates down a little bit better, if I could look up see exactly what year that was.

Interviewer: 1963.

Lilly: It was in November, I know that, because I was more or less in attendance. George Benton, a professor at Johns Hopkins, and I were being recruited, solicited to look at positions in a new organization that was being established in Dallas called the Southwest Institute for Advanced Studies.

Lloyd Berkner was the director of it. And it was in some respects based on an NCAR-type of model, except it was across a broader range of sciences and oriented regionally toward the interests in that part of the country. We came down for a visit, which was a pretty flashy things. We had our wives with us. It turned out that the day we were there, we were supposed to be there two or three days, and the day we were there was the day that John Kennedy visited there and got shot.

Interviewer: So this was in Dallas?

Lilly: This was in Dallas, yeah. It wasn't—we were—I say, almost in attendance. At one time there was a plan for us to be at the building where they were having lunch for the president, which he never got to, of course, but we weren't, we were out at some country club, I think. We heard all this on the radio sort of instantly. George had the forethought to immediately call the airline and get a reservation home that night. It didn't seem like that was a good thing to stay for any longer, so we all flew home. We weren't sure whether they would close the airports or God knows what. So nobody wanted to go back to Dallas after that for a while. [laughs]

Interviewer: [laughs]

Lilly: Dallas had a pretty bad reputation for a while there. So that sort of ruined that institute, I think. They were in the process of strong recruiting at that time in a number of areas, and I think just nobody wanted to mess with them for a while, and they didn't have much success. They eventually became part of the University of Texas at Arlington, I think, and never really developed the way they intended to. I don't think I would have gone there anyway, but it was a distinct possibility up to that point. [laughs]

Interviewer: Sometimes these instances are sort of like omens.

Lilly: Yeah, I guess! [laughs]

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Interviewer: So you came back to Washington?

Lilly: Yeah. That was '63, so it was '64 when I came here, that's right, at the end of the summer or something like that.

Interviewer: Was there someone in particular at NCAR that you wished to work with?

Lilly: Well, Phil Thompson was the director or leader of the atmospherics dynamics group, I think it was the laboratory of atmospheric sciences. He recruited me, essentially. And most of the other people that came at

roughly the same time were pretty young scientists. There were a few older ones in some areas, but the ones that I was most likely to work with were pretty much colleagues, contemporaries, for the most part. Some time not too long after that Aksel [C.] Win-Nielson was the director of that division for a while, and then Will Kellogg, of course.

Interviewer: When you first came to NCAR, was there a particular research project you were involved in at the time that you were interest in pursuing?

Lilly: Well, I was doing very much computer-related work when it was unusual to do so, because the place I had been working with Smagorinsky, they were one of the first users of large-scale computing for meteorological analysis and prediction research and things like that, and NCAR was obviously going to make some efforts to do the same, similar things, so that was an attraction. I suppose another thing that turned the crank was that at the time, our office had moved from out in the suburbs of Washington into the middle of it, and it was getting to be a miserable commute and it looked like I either had to move across town or across country, and they'd pay me to move across country. [laughs]

Interviewer: [laughs]

Lilly: Little things like that that sometimes kick you off the fence. [laughs]

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Interviewer: I assume at that time NCAR had pretty much state-of-the-art computing systems?

Lilly: Yeah, they were pretty well up the front end most of the time. I can't remember the numbers and names of all the computers. They did move along.

Interviewer: Do you remember, was it a system that was not available to you elsewhere?

Lilly: Well, something comparable was available where I was, but you wouldn't expect to have resources like that at universities of course, or any I'm aware of, anyway.

Interviewer: Was this a promotion for you?

Lilly: Well, I don't think—I don't know—scientists were doing pretty well at that time and getting pay raises and promotions. I don't think I was that—I didn't feel like I was overpaid when I came here. [laughs]

Interviewer: [laughs] None of us feel that way!

Lilly: ___.

Interviewer: If they do, they won't admit it. What were some of your first impressions when you came to NCAR of the way people interacted?

Lilly: Well, I did like—there was a broader range of interests in things that I either knew something about or didn't but would like to, I felt, where the group I was with in Washington was, although it turned out to be one of the strongest research labs, and still is, it's now called the Geophysical Fluid Dynamics Lab in Princeton, they moved to Princeton eventually, it was a good program and a good director, but he is a little bit more bossy, [laughs] determined in what he wanted to have people doing, and there was a little less of that here. In fact, there was hardly any of that at all! [laughs] Things were pretty loose.

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I found some very interesting people to work with. My early colleagues were—I listed this down, George Hidy was one of the early colleagues, who now is the—had several big jobs on the West Coast lately, now he's the head of the Electric Power Research Institute, and Jim [James] Deardorff, of course, who was here a long time, retired not too long ago, Ned Benton, who I don't know if he's still at CU or not, Fedor Mesinger, who's now a senior professor at the University of Belgrade but spends quite a bit of time in the U.S., Paul [R.] Julian, who was there a long time until recently, David [D.] Houghton, who was a young scientist at that time and then went to Wisconsin, and of course a number of other people, [Akira] Kasahara in Washington and a number of other people who have been here forever.

Interviewer: Did you find that you were working with people and disciplines that you might normally not have?

Lilly: There was a little more opportunity, especially with Jim Deardorff, if you look at some of the laboratory work, the laboratory of fluid dynamics, that was going on, and observational opportunities in general that I didn't have where I was. So I was—yes, able to do some observational work or get access to it either immediately or within a few years that was helpful to me, I think.

Interviewer: Were you down at the 30th Street building at that time?

Lilly: Yes, we were at the 30th Street building for a while, and then the dynamics group was up at a dormitory at CU, Cockerell Hall, for a few years, two or three years, and there was a little while where I had an office in the—I think it was called the Colorado Building on 14th and Canyon or thereabouts. Used to be a—

Interviewer: That site I hadn't heard of.

Lilly: That was occupied for a year or two by some NCAR people. It was a kind of tall building there that used to have a little department store in it. I'm not sure what's in it now. I think it was just called the Colorado Building. It probably was the tallest building in Boulder at that time. In fact, there aren't that many tall buildings, it may still be. [laughs] We had a couple floors there for some reason, I don't remember why. And I think we may have moved out of there to the Mesa, or else back down to 30th Street. I don't know. There was a lot of moving around.

Interviewer: Right, there still is! [laughs] When you came to NCAR, did you have particular research goals in mind you wished to achieve?

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Lilly: Well, yeah. I had—oh, they were changing. From the time after I got my degree, I thought that I'd be looking to carry out numerical simulations of clouds and thunderstorms and things like that in the same way people had been doing with large-scale weather patterns for a few years. It seemed like that was a good thing to do and there would be some research and possibly prediction activities out of in. In a way, I've stayed with that ever since, although there was a time where we realized we couldn't do much without three dimensions, and the computers weren't big enough to deal with three dimensions, so we sort of had to sit back and wait a while. But then I got interested in the mountain waves, get your house blown away a couple times around here, that's always kind of exciting.

Interviewer: [laughs]

Lilly: [laughs] Brings on a little extra—I found we could learn something about that, observational work and also theoretical analysis. There were several people that were attracted to that and we were working together.

Interviewer: What division were you with before you left NCAR?

Lilly: Well, it was—let's see. It was AAP. Before that broke up, rearranged, just in the last couple of years. That was the division that existed for about seven or eight years, I imagine, before I left.

Interviewer: Did your research interests change beyond what you were just describing during your career?

Lilly: There was a variety of things, but mostly small-scale meteorology goals, circulations and numericals and predictions or simulations of them and observational work-related, a little bit of laboratory work with Deardorff.

Interviewer: Were you involved in any of the big projects?

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Lilly: No, I seem to have always kind of avoided the big-field programs. I've been involved in the formulation of them in some respects in the GARP programs and several others, but when it came around to the field programs, I guess I seemed to be better on the smaller-scale activities.

Interviewer: What was your role in the GARP project?

Lilly: Oh, [pause] I don't know. I went to a lot of meetings. [laughs]

Interviewer: [laughs]

Lilly: And I guess I was a group head for some of the tropical people for a while. That was after their field program, though. I was keeping a pretty strong interest in it, I just didn't actually participate in the field projects much.

Interviewer: Is that project still going on, GARP?

Lilly: I don't know if the NSF still has a office with that title on it or not. There isn't much money going into it, if any.

Interviewer: Who would you say in your career at NCAR has been the most influential in setting scientific priorities? We're doing a little switching here to general observations.

Lilly: I set most of my own, I think, but Chuck Leith was always a highly respected colleague and my boss on some occasions. And Jim Deardorff was a close colleague whom I worked with. We helped each other, I think, quite a bit. I always had a lot of respect for Phil Thompson, but I don't think any of those people really pointed my way very much. Sometimes they helped to suggest when things weren't a good idea, I guess. [laughs]

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Interviewer: What would you say are NCAR's strengths in research?

Lilly: NCAR could always maintain—or could, and they used to in principle, maintain a program with longer continuity than you can usually do at a university because of the sort of student cycle turnover time. And at the same time, they seem to have a more intellectual flavor than most of the government labs. There are some exceptions. The government labs depend a great deal on who the director is and how well that person can—how strong the goals are. So there are some very good ones, but NCAR is sort of comparable to the better of the government labs, but with this kind of

academic flavor that can pull quite a lot of university visitors and sometimes students finishing their degree, a lot of post-docs. I don't think I have anything that's different from the usual propaganda on that. [laughs]

Interviewer: [laughs]

Lilly: I agree with it, large, in principle, anyway.

Interviewer: What about its weaknesses in the research area?

Lilly: I don't know about the research area. NCAR's always had a weakness in the management area, which starts from the top, I guess, from the Science Foundation, which is that NCAR scientists are always—they feel like they're being kicked around some, that the NSF program managers tend to feel that university are their principal job to support, that NCAR is a competitor and sometimes an unfair one, they feel, and that the universities are always looking for NCAR to provide them with services in the facilities area, but they don't necessarily enjoy the research competition. And I mean, I'm at a university now and I still feel that way, although there are times when NCAR gets carried away and has to be pulled back to reality, too. [laughs]

Interviewer: Do you think there's a way that NCAR could improve that image? Something that they could do?

Lilly: I don't know. There's some old, long arguments. I've had certain opinions on them, and the universities have often said, it keeps coming up that, why don't the NCAR programs write individual proposals like they have to and be evaluated on that basis and get their support on that basis? And I would have said, "Great, fine," I would have been in favor of that almost any time I was here, and so, I think, were most of the stronger scientists. But that was not—then management wouldn't have anything to do, so that was kind of against the basis of a managed hierarchy. [laughs] So the internal management, I felt, of NCAR, was really against that. So I don't know what's the—never have known what was the best answer on that.

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Interviewer: So you think the internal management at NCAR wished to retain more control?

Lilly: Yes, yes. That's what they were hired to do, you'd think.

Interviewer: Over which projects were supported?

Lilly: Yes. That means that even the strongest scientists at NCAR have less ability to control their own programs or to start up new initiatives with any speed. They're always having to stand in line and wait for something from gradual changes. I don't know if it's necessarily always bad, but there were times when it was very frustrating.

Interviewer: Would you say overall that management has provided a positive atmosphere?

Lilly: I would say that the management of NCAR has become professional over roughly the last eight years, maybe, and before that I felt they were not really very professional management. There were some cases of very good scientists providing relatively erratic management or—or something else again. In recent years they've become quite a strong management, I think—mostly since I left. [laughs]

Interviewer: Do you think that's positive?

Lilly: Oh, yeah, sure. Yeah, it really works better if you've got a—it's better to have good managers than poor ones, even if you don't necessarily like their style.

Interviewer: Were you ever an administrator here?

Lilly: Oh, yeah. I was a division director a couple of times, for relatively short periods of time. Mostly I was the head of a level below that, a scientific group.

Interviewer: How did you make that transition from being a scientist to an administrator?

Lilly: It was pretty gradual at the time. When I came there was just four or five of us working together, and I became the spokesperson for them, and it gradually grew somewhat and evolved and names changed and reorganized. But there wasn't any very sharp dividing line that I can remember. [laughs]

Interviewer: [laughs] Were you involved in any policy development?

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Lilly: I suppose I thought I was. [laughs] Must have been. There was thousands of meetings that were supposedly along those lines.

Interviewer: Anything in particular?

Lilly: Anything in particular that I'm proud of at this moment? I'm not sure. [laughs]

Interviewer: [laughs] Proud or otherwise.

Lilly: I was pleased to move off the Mesa. [laughs] I don't know if you call that a policy decision. I brought down some of the group of people that are down here now. I thought that was at the time a good thing to do, and still do, but that's not exactly a policy decision.

Interviewer: Why did you think it was a good thing to do?

Lilly: Because they're overcrowded up there, for one thing, and besides, I was trying to get a little bit further away from the top management at the time. [laughs]

Interviewer: Did you feel that they were infringing on your creativity?

Lilly: It was a little too—well, something, yeah. There was some unpleasantness.

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Interviewer: I'd like to move on now about changes at NCAR from when you started to when you left. In general, how has the research changed?

Lilly: One thing that's changed for the worse, I think, was that the ability for the scientific staff here to interact quickly and easily with some of the observational facilities, the aircraft and radar, the principal field observing facilities that NCAR has, at one time were at least sometimes available on fairly short notice and fairly informally. And some of our best—well, the actually most—probably most quoted, at least one of the two most quoted or utilized pieces of work I did was an airplane flight into a downslope windstorms, one of the strongest windstorms we've ever had here, in 1972. And that was—we had an agreement, arrangement, to have access to the aircraft facility for a certain period of time during that winter on a sort of on-call basis, but not very well scheduled. It was—maybe there were some other programs that were going on, too.

But that morning, the wind started picking up pretty strongly, and Ed Zitzer [?], who was working with me on that project at the time, just called down to aviation and said, "Let's go. Let's get an airplane going." And they were able to do that, and we had two flights and they were absolutely the most dramatic records of intense downslope windstorm wave observation that anybody's ever seen since, at least well documented. I doubt that could be done now, that that kind of response could be obtained by scientists here in a situation where an event really cannot be foreseen any distance in advance.

Interviewer: Why do you think that is?

Lilly: It's sort of unavoidable. It's competition. The demand for use of these facilities has been stronger than the support available for them, and it becomes—then you end up with a rather bureaucratic way of managing it, with assignments six months to a year in advance and done by committees and proposals longer than that and all that kind of stuff. I guess it's unavoidable, though I think somehow there still ought to be—what it has done—well, between that and the way the facilities are budgeted, it has reduced the internal use of the NCAR field facilities to now a fairly small fraction of their total use. There's considerably more use made of them now by universities than internally. I think that's kind of strange. It's been a—when they reorganized the division down here, the MMN [?] division, this was one of the things I was pushing, encouraging them to try to redress, to get a better balance between field and theoretical or computing work within NCAR. It's partly a matter of these bureaucracies that I'm saying, but I think also partly the way the budgets are managed. The NCAR research divisions do not have money set aside, typically, for field work, or at least not much, but if they want to go out and use those field facilities, they have to, where a university group can put it on their proposal budget. It doesn't seem to work in parallel somehow. Those are things that people could do something about.

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Interviewer: Would you say there's been a decrease in the emphasis on collecting observational data?

Lilly: It certainly seems so, yes.

Interviewer: Is that a trend in the field in general? Is that just something—

Lilly: It could be partially in the field in general, it's true. But the fact that the ratio of the use of the NCAR field facilities between internal and external use has changed means that there's some change in the balance locally that's even larger.

Interviewer: Any other changes related to research that you've observed?

Lilly: That's a pretty big title. [laughs] I'm sure there are, but it doesn't come immediately to hand.

Interviewer: How about the interdisciplinary approach to research? Would you say that it's more prevalent now than it was when you first came? You mentioned that you had the opportunity when you came here to work with people in other areas.

Lilly: It all depends on what you call disciplines, I guess. The big sound and fury now is in these earth system sciences and climate change and those are somewhat inherently interdisciplinary among the traditional disciplines. I'm waiting to see very much real science in it. There's motivation, obviously, but I'm not sure whether they have the tools.

Interviewer: Are you referring to thinking of computer applications?

Lilly: Well, the right scientific approaches.

Interviewer: How about in the management or organization area? We saw a great change at NCAR during the JEC.

Lilly: Right, that was a big crisis. It was about that time I started thinking about leaving NCAR, but it wasn't really practical, because when you've got kids in high school, junior high, they get very irritated about moving, which all mine were at that time. But that was a very unpleasant period, and I think very unnecessarily so. The UCAR board simply couldn't seem to face up to the fact that they simply had to change their management team, and instead they wanted to reorganize everything with a—oh, I don't know. They spent a lot more time in trouble and destructiveness doing it than I think was necessary. But we all got over it, of course.

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Interviewer: Any other changes in the organization that you've observed?

Lilly: I think in the last five or eight years, they've gotten much stronger, the management group here. Hopefully it'll stay that way or close to it. The division heads they've had the last few years as a group are among the strongest research managers I've ever seen.

Interviewer: How about people interactions? We hear the comment that when NCAR first started, it was more like a family and more it's just so large.

Lilly: Oh, yeah. It is too big. Just go and look at the list of seminars in the summer and there will be two a day, and nobody in the world could attend all that, in maybe four different buildings. People tend to mostly settle themselves into a manageable body and deal with a manageable-sized group of people. Actually, NCAR has always been, or at least after the first five or six years, sort of a national center for atmospheric communication of interaction in the whole field. Just look in the cafeteria any day, in the summer especially, and you'll see people, visitors from 15 different places, pretty senior important people and all that. It's a great place for a young scientist to get a piece of—get an idea of what's going

on all over the field and meet many people in it, and I think that's why the ASP post-docs have been so attractive for so long.

For me, anyway, I sort of tried everything and didn't see anything—it was getting a little boring. If you participated in all that intercommunication, you couldn't do anything else. They don't—they have new people coming in and out, post-docs especially, which is a refreshing thing. It's a little better at a university, where there's graduate students coming in and out, even faster and more of them. They aren't as—they don't know as much. But there's some of the same aspects. It depends how people set themselves up. Some groups, some individuals can become as ingrown and isolated as the worst of the government labs. Usually they get found out. [laughs] Pushed out or done something with. But I do think there is a problem of insecurity. NCAR's scientific staff has always felt like they were regarded as second-class citizens, that management doesn't always stand behind them. They're regarded in a competitive mode more than a—because the NCAR management is beholden to the University trustees run by UCAR to a large extent, who often are in a competitive situation. You get a lot more strokes at a university, typically, than you do at NCAR. [laughs] That was my impression, anyway.

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I thought so when I was here, and now that I've gone some place else, I believe it's so, too. Although we have other problems, of course.

Interviewer: Would you say in talking about receiving more support, say, at the university level, would you say that NCAR perhaps doesn't take as many chances with research as they used to?

Lilly: [sighs] I don't know. I don't know. I don't know if I could respond to that. I think it's still possible for individual scientists or small groups to go off in a somewhat different direction from the rest of their division or from what's been expected, and if it looks like it's going to work, I think they'll get some credit for it. I just don't know how to compare that.

Interviewer: Would you say in the earlier days that the flavor was more for doing more experimental type of things?

Lilly: I do think there was more opportunities for observational interaction on a relatively—without it necessarily being a national or international program.

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File 2
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Lilly: I don't know. it's both a problem and an opportunity that almost everything they do that really works well, there's some pressure on it to become a facility, to make it available in some way to everybody else in the world, at least to all the university members. And that's I guess a privilege in a way, but it's quite a burden. I've seen that myself from the other side. One of my students is working with a young scientist here in some work-related Doppler radar and using his program, using his analysis program. And it turned out that she couldn't make it work, and she discovered it had some flaws in it that made it impossible for her to use, though it had worked fine for him in his previous dataset. And then he felt somewhat responsible for fixing it and making it work, even though it wasn't really a facility or anything. So that put a considerable burden on him, and we are certainly glad he took it, but that sort of thing doesn't give you publication credit or anything. [laughs] It's just dog work. [laughs]

Interviewer: [laughs] In your opinion, what would you say are NCAR's major contributions?

Lilly: I don't know, when I look over the whole world, I've always thought that among the things I was associated with that Jim Deardorff's work was so far ahead of its time that it wasn't even hardly recognized as such for the first five years.

Interviewer: Was that the modeling?

Lilly: Yeah, turbulence simulation, boundary layer numerical simulation. It was only about 10 years after he quit that people were able to catch up with it, hardly, so that was something—and I had, to the extent that I had influence on that, and I think I did, why, I was very proud of that. Some of their other big programs, they were just one of several participants and perhaps were essential in some ways, but I don't know. It wasn't my style. I probably didn't know how to be a protagonist for that. Some people would be.

Interviewer: With Jim Deardorff's model, is that still used today?

Lilly: It's been superseded, but only recently. Most of the work that he'd done has been better now by computers that are 50 times faster and some other techniques that were not available to him.

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Interviewer: This reminds me of a question I had earlier when you mentioned that with your earlier research that you had done about as much as you could with the computer technology that was available.

Lilly: At that time, yeah, mm-hmm.

Interviewer: Did you or your colleagues work with the computer industry to communicate to them what you thought you might need to advice your field?

Lilly: I didn't personally. Perhaps that was done to some extent by the SCD or the computer facility directors here and in other places. I guess there was. I didn't ever have anything personally to do with that.

Interviewer: It must be pretty frustrating to reach a certain point and then realize you can't—you'd like to go further, but—

Lilly: Well, computing tools have advanced faster than anything else, than any other kind of technology, almost. You look on any time scale, and that tool tends to be leading the problems, often. We were—it is—in any area of fluid dynamics or meteorology, it's possible to exceed the capacity of any computer just by increasing your resolution some more. I don't know if that was really the major stoppage point or that I needed some better people around for a while. [laughs] When I got the—when the right person came in that was really capable of going into that, which was Joe Klemp [?], we did pretty well.

Interviewer: I'd like to get back to some of the broader overview-type questions. Do you recall any ideas or projects that never achieved success?

Lilly: [laughs]

Interviewer: That you felt should have—

Lilly: There were a lot of acronyms that died. You sort of put those out of your mind. It wouldn't be hard to go back through probably even some of my old files and just look at the headings on the folders that are sitting there and say, "Gee whiz, what ever happened to that?" I guess there was, but—

Interviewer: Any in particular that you felt should have had more attention?

Lilly: Strange things happened at NCAR. They abolished the chemistry program for a while. [laughs] Guess you heard about that.

Interviewer: [laughs] Repeatedly!

Lilly: And after three or four years reestablished it, after they'd chased out most of the people they thought were not adequate or something. Nobody at the time thought that was a very intelligent thing to do. [laughs] But they couldn't figure any other way to reorganize.

0:07:08.0

Interviewer: In your opinion, what areas should NCAR focus on in the future?

Lilly: [pause] If I was that smart, I guess I'd be richer. [pause] In recent years, there's been somewhat of a competition between the global and climate people and the small-scale or meso-scale storm-related people or programs. At the moment, it appears that the climate has got the upper hand. We're in a field that involves a lot of ambulance-chasing, ultimately. There are crises that are real or appear to be occurring, and those are the ones that get the most attention. You'd like to have stable programs going on in the areas that don't have current crises. NCAR seems to be somewhat more susceptible to losing their nerve on those areas, on areas that aren't in the current crisis mode and giving up on them rather than maintaining a strong program that would be there when the time comes right. I think. Perhaps we've always said that.

Interviewer: Are there certain areas that you would like to see NCAR to continue to be strong in?

Lilly: Well, yeah. I feel that they've had a long tradition and some very good work in turbulence, and that seems to be fading out. It seems to be losing. They seem now to have to get external money to keep it going, and it seems like to me that should be a long-term part of the program.

Interviewer: I think that covers all of my questions. Thank you very much.

0:10:17.6 End file 2.

END OF INTERVIEW