RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY

NEW BRUNSWICK

AN INTERVIEW WITH PAUL L. LEATH

FOR THE

RUTGERS ORAL HISTORY ARCHIVES

WORLD WAR II * KOREAN WAR * VIETNAM WAR * COLD WAR

INTERVIEW CONDUCTED BY

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Sandra Stewart Holyoak: This begins our third session of our course of interviews with Professor Paul Leath in Piscataway, New Jersey on May 24, 2011 with Professor Paul Clemens and Sandra Stewart Holyoak. Thank you again Professor Leath for allowing us some of your time.

Paul Clemens: I have a sneaky question which you're free to duck. We interviewed this morning Peter Klein. [Editor's Note: Peter Klein is a professor in the philosophy department at Rutgers-New Brunswick.]

PL: Yes.

PC: One of the things he told us was that in the very enjoyable provost meetings that you had him at, you would always start with a bad joke. Actually, he said, you'd always start with a joke, and then he paused, and said, "A bad joke." So, I wonder if you can tell us a bad joke. [laughter]

PL: Well.

SH: So we can feel included.

PC: That's right, but you don't have to.

PL: … I don't think I always started with a bad joke. I often told jokes, but they were often puns that I would make up on the spot. So, one of the bad ones that I made up was, we had a proposal from a faculty member in psychology, just next door here. ... I think it was a woman, this woman was studying the mothering instinct in pigs, and so she had to raise some kind of miniature pigs, and they would have little piglets, and she would do various, I don't know, observations, I guess, of relationships, maybe she did some kind of minor experiment on them, I can't tell you, but in any event, she had these pigs housed on the roof of the psychology building.

PC: Wow.

PL: … The problem was, as happens with pigs, they rooted around, and made holes in the roof, and the roof was leaking. The provost office was being asked to supply the renovation money to repair the roof that was damaged by these pigs. … So, this was a project that I named, "Sty in the Sky." [laughter]

PC: That is wonderful.

SH: You can not make this stuff up.

PC: You really can not.

SH: Okay, Professor Clemens.

PL: So, there's one of my bad jokes. [laughter]

SH: When we left off last time, we were discussing the Faculty Council, and how there wasn't a Faculty Council in Camden, but there was one in Newark, but the University Senate covered all three campuses.

PL: The University Senate covers all three campuses, and there are people elected, generally not by campus but by their academic units throughout the entire university. So, the Senators are representatives of, in those days, Rutgers College, Douglass College, and the Faculty of Arts and Science, for example. Each school elected their representatives. Similarly for the Camden College of Arts and Science, the Camden Business School, or Newark School of Criminal Justice, etc. They all elected their representatives. The Senators came from all the units on all three campuses. The University Senate is not a faculty senate; it is a University community senate. It has faculty, students, administrators, alumni, staff members, and representatives of all sorts of groups that are part of the university community. The largest contingent, the plurality, is faculty members, but there are many student senators as well. So, it's a very different thing than the Faculty Council. The Faculty Council was a purely faculty body. It had no administrators on it. The Senate does have some specific duties where it has powers that are spelled out in university regulations, or its bylaws, that are passed by the Board of Governors. The University Senate has sole power for setting the university calendar, so for example recently, they've been debating this issue, should we allow commencement to take place on Sundays. That is an issue in which the Senate really does have the power if they want to exercise it. However, there are other areas where it has some power. For example, if there is any major change in the structure of the university, the Senate must to be consulted. It doesn't mean that their advice has to be taken, but … they must advise the Board of Governors on this. Most recently, there was a proposal to create a school of nursing in Camden, and that was a big issue. Did I already talk about that?

SH: You did, and how there was just one faculty member.

PL: There's only one tenure-track faculty member. Also, there are a few other areas on which they have to be consulted. The Faculty Council on the other hand is purely advisory in every respect and has, doesn't have to be consulted on anything.

SH: Has it ever had any power?

PL: No, that's the way it was proposed by the faculty committee. There was a big discussion about this on Dick McCormick's committee. Dick McCormick, when he was Chair of the History Department, chaired this committee that set up the Faculty Council, and they debated whether to give it any real powers. One of the powers that I think that they debated was whether it would have any power over the curriculum in New Brunswick. If there were conflicts, say in biology between Cook College and arts and science, would they have any power to mediate or make a decision, that sort of thing. They decided at the time and that's the way it's been since, that they don't have any power, they only have the right to advise. So, that's what happened with the Faculty Council. Newark has a Faculty Council created, shortly after it was created in New Brunswick. Frankly, it was never as democratic as the New Brunswick Faculty Council once

was. It was always under the thumb of Newark Provost Norman Samuels. Camden never created one largely because I think the faculty in the Law School did not want to participate in one, so they have a faculty senate of their College of Arts and Sciences. … There were faculty bodies, of course, in their business school and their law school, but there is no campus-wide faculty council like the other two campuses have. So far they've refused to create one. So, that's been an asymmetry. We tried to get at one stage all of the faculty councils together, and we created something during Fran Lawrence's tenure called the President's Advisory Council (PAC), which consisted of three representatives from each of the three campuses. They were basically three officers of the New Brunswick Faculty Council, three officers of the Newark Faculty Council, and in Camden, it was one officer from each arts and science, business, and law school. … The PAC would meet at first something like twice per semester with President Fran Lawrence and VP of Academic Affairs Joe Seneca. We accomplished some things in those days, when we were talking about big, hot issues, such as for example, whether there ought to be health care benefits for gay partners, and we made a little bit of progress with the President. Minor issues, I wouldn't say anything really major had happened, but we talked to the President about the important issues of the day, at least the issues that the faculty and the students seemed to be concerned about. It was okay, but it kind of fizzled out, and when Dick McCormick came as President, he didn't want anything to do with it, so it stopped operating.

SH: Does the faculty body, have they ever had any kind of input into administration, Old Queens, as far as determining, like a vote of confidence?

PL: Well, yes … they did do something like a vote of no confidence in Fran Lawrence, which very much upset President Lawrence. … There was a petition that went around among Professors II, on the campus, just in New Brunswick I think. Professors II signed a petition of no confidence in the President. This was shortly after his famous racial remarks, and the President was very upset by this petition. The rumor always was that, after that he never would allow a Professor II to serve on a major university committee. [laughter] Whether that's completely true or not, I'm not sure.

PC: I know of one PII in my department who had been personally snubbed by Lawrence, as often happened with him. He was a very thin-skinned man. I remember the Professor II carrying the petition around the halls of our building.

PL: Are you talking about Gerry Grob?

PC: No actually, I was talking about Lloyd Gardner.

PL: Oh, Lloyd Gardner.

PC: Gerry was involved in this. George Levine was involved in this.

PL: I know Gerry was. I heard Gerry talk about it several times.

PC: Oh yes, Gerry was really angry with Lawrence.

PL: Gerry was really upset.

PC: Gardner who has a very, a very, himself, a very prickly sense of sort of propriety, Lawrence had insulted him in some way and that was it. I mean, he was just so angry with him.

PL: Well it's very true, after that there were very few, if any Professor's II put on committees. He always would seem to get other faculty. My personal opinion, and I sat in on many meetings, was that President Lawrence was afraid of the most distinguished faculty members, very much afraid. Instead of reveling in their great research success, he seemed to fear it.

PC: I agree. That is my read of the man too.

PL: [laughter] Right.

PC: He had a sense of insecurity which he just could not overcome.

PL: He had a sense of insecurity there that was patently obvious.

SH: Because I just wondered if at any point faculty were ever asked to express a vote of no confidence in the President.

PL: Well, that's the only real case that I can recall at least.

PC: The faculty voted across the board to, in almost every unit, a vote of no confidence in Bloustein, now, I cannot remember exactly what it was over.

PL: That had to do with disagreements with the AAUP.

PC: Yes, it was an AAUP issue.

PL: About salary increases, I believe.

PC: Merit, yes.

PL: Merit increases or something. That happened early on, and it was obviously a low point for Ed Bloustein. This was well before the time he hired Alec Pond. This seemed back in his early days. … He somehow survived that, and his reputation grew as time went on, but that was a low point. So, that happens and faculty bodies can certainly take such votes. I don't know if the University Senate has ever, in its history, taken such a vote. It might have over the years, it's been in existence for a long time, I don't know.

PC: No memory of it.

SH: Has the University Senate always included students?

PL: No, I think that happened during Mason Gross's time. It was initially just a faculty senate. Most universities have faculty senates. We're unusual in that regard. It's a concern to many faculty members because faculty senates often take up issues that are very much faculty issues. Well, they recently did take up some faculty issues, but it's more difficult in the Senate because it is a body that includes the students, alumni and the administration. It's a different kind of thing from a faculty senate. Recently, the University Senate passed a resolution relating to the tenure rule for promotion from associate to full Professor II. It was a motion that basically applied when a faculty member has been associate professor for more than ten years. University regulations say, in this case, that the weightings will change, and you can weight teaching and service more, relative to research or scholarly at this point. What the Senate recently passed is that if one is coming up for promotion after ten years … there should be the right to send out different letters to the referees than the standard request letter for promotion to full professor, thereby, letting the referees know that there are different criteria being used for this individual. They also proposed revising something called Form IA in this case to provide more places for distinction in teaching and service than had existed in the past. I guess that proposal will also be adopted, I don't know since the previous motion that was just passed this spring by the University Senate.

PC: The way the university works, if the Senate passes it, it still has to be approved by the Board of Governors?

PL: Oh, absolutely.

PC: That's what I thought, okay.

PL: The administration and the Board of Governors, depending on who has the ultimate say in any particular issue. The Board of Governors doesn't get involved in exactly what the letter goes out to referees, so that's probably just an administrative decision, so we'll await to hear how President McCormick responds to this resolution.

PL: I think he's getting similar advice from (CAPER?), this committee that is the successor to (CSPAD?).

PC: Small footnote. They sent around … an e-mail to many of us who have had administrative positions, asking us what we thought of the ten year rule. I answered whatever questions they had, and at the end there was a place for comment. I started writing my comment, I just kept writing and writing and writing, by the time I got to the end of it I changed my mind. It was so complicated, of all the variations and permutations on, in my mind of what could go wrong with this screwed up rule that nobody would have ever been able to apply, albeit, I think we had one student, one person in the history department.

PL: A slight majority of the administrators, that were asked to fill this out this survey, said, that, in fact, you should promote someone to full professor even if they had no scholarly activity at that point.

PC: That was my problem, my problem was sending this silly letter out which says we're going to promote somebody on a different set of standards.

PL: Than you're actually going to do?

PC: To another university, which will then read that Rutgers has lower standards. …

PL: Oh, right.

PC: That just really bothered me.

PL: That's very complicated too. Well, so, I don't know what's going to happen. But, actually what tends to happen, you may be interested to know the data on associate professors who've been in rank more than ten years. Would you like to guess what has been their average number of years in rank?

PC: More than ten years, twenty.

PL: Twenty-three years.

PC: Woah.

PL: Twenty, they've been in rank. These people typically have been in rank associate professors, for more than twenty-three years, and never been promoted to full professor. We had a case like that in our Department, and this was a person who was an excellent teacher, and we basically ended up just encouraging him to get external recognition for his teaching. He managed to get a grant from the National Science Foundation for teaching, and external referees began to recognize him, and so we could have sent a different letter to these people saying, "What do you think of this work which is now funded by the National Science Foundation," whatever, but it's not research in physics.

PC: Let me, this is going to jump us all around. Let me ask you a couple questions about teaching in physics. Two things, one is my memory is that your department and maybe either chemistry or math or somebody hired people who were specialists in the teaching of their disciplines.

PL: We have one instructor who is a specialist in teaching, and we run two series of very successful introductory physics courses that we call gateway courses, and they're introductory physics courses for underprepared students, that have been found either from their background before they've come, or from a placement test. The students are put in a special class that meets more hours per week, and they ultimately have to meet the same standards as the students in the regular course. One of these series of courses for science majors is taught by an instructor that we hired, who is a specialist in such teaching. He's not a tenure track faculty member. We also have another person, who is really a staff member, actually an assistant that helps run the MSLC,

an assistant to Kathy Scott, the director of the MSLC. She is an expert teacher, and she does this for our series of courses for engineering. These two teachers are both absolutely excellent. They get better teaching evaluations than any of us who are tenure-track faculty. They're really truly, super teachers, and we do have them, they're not tenure-track faculty though.

PC: Okay, my memory of it was somebody hired in the sciences maybe on a joint appointment with the Graduate School of Education whose field really was.

PL: Well, that's true, that was Eugenia Etkina, who was an expert in this sort of area and we hired her but I think we hired her just as a lecturer or something, but she is so good that in fact she was then hired by, as a … full-time assistant professor by the Graduate School of Education. She publishes in the area of physics learning and education and she's now gotten tenure and in fact, may be a full professor in the School of Education by now. She does do research in education, in physics education.

PC: Oh.

PL: … [She] has setup a whole new teacher-training program, that's been very successful at training high school teachers in physics.

SH: I have seen some press on that, yes.

PL: Oh, you've probably seen some press on that, but she's gotten regular tenure promotions and everything else due to the standards in education, and she does important research in physics education. For example, if you're teaching a physics course in electricity and magnetism, how do you go about teaching this particular concept so that students learn it? She's really down to the nitty-gritty detail of how you get students to learn various physics concepts and she tests learning with tests of the students to see if they've learned by this approach or that approach. She teaches mostly, I think, by the discovery method. I don't know if you know what that is. That's where you let the students discover the laws of physics themselves. She really is an amazing teacher. She's really amazing and she still runs for us a summer course for high school students here in the department. We get high school students from all over the state that come and do astronomy, and basically they're given data in either X-ray astronomy or radio astronomy, I'm not sure, which has never been looked at by anyone and they're trying to discover astronomical objects. Students do the research, and they can publish papers on it. In any event, they do a paper on it for the class and they … have a day when when the students all have to give seminars. These are high school students, and prior to the summer where the class is taken, their high school teacher has to give them background in this area. Professor Etkina also runs programs for the high school teachers in astronomy to help them do this, so … it's a major program. It's actually patterned after one that the Waksman Institute runs in genetics. They do a similar thing in genetics for high school biology teachers. A faculty member named Bill Sofer over there, runs that program. Very successful programs and the best students are the ones that tend to do this.

PC: The other thing that connects, you mentioned quickly in passing the Math-Science Learning Center. Where did that come from the learning, the Math-Science Learning Center?

PL: … How did that start?

PC: Yes.

PL: That started in the physics department. It was started by George Horton and it was called the Physics Learning Center. It's partly a little science museum where there are all kinds of experiments set up over there, and students can come and do the experiments related to the concepts they're learning in their physics courses. Also, the Physics Learning Center used our own graduate students as tutors and the undergraduates could come there and get tutorial help if they were having problems with a particular introductory physics class. It was also a resource center. For example, they had all the old exams from all the physics courses, and a student could go over and, for a very small amount of money could get a Xerox copy of any old exam in the course. They did many things to help the students in the introductory classes.

PC: Was it grant funded? …

PL: Yes, I think they did have a grant for early on. I think George Horton probably got a grant. I know they kept coming to the provost office wanting money to run this program and wanting space. There used to be some old barracks out on the back of the Busch campus. They were left over from World War II, and they originally had it set up over there. … At some point, maybe when McCormick was dean, it morphed into all of the sciences, and became the Math-Science Learning Center, and not just the Physics Learning Center but it started out as the Physics Learning Center. The Physics Department started that, George Horton started that. … George Horton introduced lots of innovations into teaching physics.

PC: I remember as well that he was mentioned in something I read, as one of three professors, the other ones were in chemistry and maybe math, maybe it was Steve Greenfield. Who had gotten a big grant and ran, each of them ran a course in their discipline for more general students.

PL: Well, that was probably the gateway courses, the grant that started these courses. I think George Horton started all of that and got a grant, probably jointly with math and chemistry. There was a time when there was a big push on, at least in the sciences for these so-called gateway courses for students that were underprepared, remedial courses if you will. I'm not sure the extent of which they still exist outside of our department. I think Amy Cohen now still runs one called "Math Excel" over in the math department. I don't know if they still run anything in chemistry, but it was a tremendous success for the college of engineering because they were having a big problem with retention rates of freshman engineers coming in and failing out, failing their physics, math, and chemistry courses and this … helped them very much.

SH: Did any of this come out of the changes in the curriculum for the, during the reunification of that federation or organization?

PL: No, not particularly, no. … This was just to help them with the standard courses that had existed for a very long time. Those haven't changed with the reorganization. The most successful one, the first one that George began was for engineers. Engineers take two years of introductory physics, and this gateway course runs only for the first year. In the second year, the underprepared students have to merge in with everybody else. So, this remedial course has to bring them up to speed, and the true test is whether they can make it in the next year, along with the other students. Generally, they do very well, and the retention rate has gone way up in engineering. This has been a big improvement.

PC: But why is it?

PL: There are lots of underprepared women and black students in this course, I should tell you.

PC: Why is it that if I accurately remember, I'm going to make these up but if you have, when you teach upwards of four thousand undergraduates every year in physics, and yet you only have at the end of the line, thirty or forty majors. Why?

PL: … We have 150 majors.

PC: That graduate each year though?

PL: … Each year we graduate forty some odd, if that's what you mean.

PC: Yes, forty graduating seniors out of 4,500 are taking courses.

PL: You should know that that is, or at least was, when I was chairmen, the fifth largest physics major program in the United States.

PC: … That shocked me.

PL: Okay.

PC: Why?

PL: What is more typical is to graduate ten to a dozen physics majors a year.

PC: There isn't work for more than that? Why?

PL: No, it's not that there isn't work for them. They all get hired or to graduate school. It's just that it's a lot of hard work to be a physics major. First of all, you don't get that much more money when you get a job as a physics major. Companies don't have any positions called physicists, so if you want to go out and get a job with just a bachelor's degree and get a job, you'll likely get a job as an engineer.

PC: Okay.

PL: … So, a lot of the people that historically would become physics majors are people that were really planning to go get a PhD some place. ... I think all our graduates, more or less, go to graduate school these days except maybe a few who get double degrees in engineering and get engineering jobs. Well, I can't tell you except that it is a very hard major, it's a very challenging major, you have to take a lot of very tough courses. … That's really all I can tell you. … It's that way everywhere. It's a very objective subject, you really have to do it, and you really know whether you've done it or not. I can't really easily tell you. Maybe we don't do a very good job of PR. We've done all kinds of things that brought our numbers of majors up from small numbers. Probably, that was one of the changes that happened when I was chair. We were graduating only about a dozen per year, and we raised it up to something like thirty to forty a year, and that's what brought us way up above almost all of the other schools and universities.

SH: You also introduced a master's program too, right?

PL: We don't have any real master's program. We've done that from time to time but they've never been successful in the long term. We even had a master's program in physics teaching, but we never enroll very many students in that. We give Master's degrees now, but they're mostly consolation prizes to people who don't make it to the Ph.D.

SH: Oh, okay.

PL: But the undergraduates, we now have a lot of different tracks for physics majors.

PL: There is the professional track, which is for people that want to go on to graduate school and become physicists or physics professors. There is the applied track for students who really want to go into industry. … Then, there's a so-called general physics major and this is almost exclusively for students that do dual degrees, and they'll get a degree in physics and a degree in something else. Maybe their plan is to go to law school and to study patent law or maybe … they want to be a science writer, and so they'll do journalism along with physics, or they will do the biology courses and go to medical school. They want to do something other than be a physicist, but they want a degree in physics, and we have a fair number of those now. … It has a little bit less physics in it because they're usually doing something else besides physics as well. But in any event, we now have, I don't know the latest number, 150 or 160 total majors. … You might not think that's very much, but other physics departments think that's unbelievable. [laughter] … We don't justify ourselves and the size of our department from the number of our undergraduate majors, we do that probably mostly on all the service courses we offer to people that just take physics courses, which is thousands. … The other thing we do, in introductory physics courses now, is that we have lots of very specialized, undergraduate physics courses. For example, for the last several years each fall, I've been teaching introductory physics for students in our College of Pharmacy. In this course, we devote ourselves to biological and medical examples of physics, applied physics. We also have a separate course over at Cook. We have many different introductory physics classes that are tailored to the needs of different students. Well, we have a two-year sequence just for engineers. Then we have a physics course for science majors, basically, the math majors, the chemistry majors. We also have a separate

course, which was actually very cleverly done, called "Honors physics" which is a three-semester introductory course for physics majors. That now has about one hundred students in it per semester, and that's because we convinced the College of Engineering that their honor students ought to take this very rigorous course rather than the regular engineering physics sequence. It's a much more rigorous course than the engineering sequence, and so it's a great course to teach and has fantastic students. In any event, we have lots of different introductory physics classes. It's not just vanilla, it comes in many flavors. [laughter]

PC: Let us move back to your time as provost.

PL: Well, I was going to go back even to the end of my time as associate provost for the sciences, which also merged into the beginning of my time as provost. This time had to do with the creation of the high-tech centers. That's something that we didn't talk about before. We did talk about WCSL's and HRRF's, I think.

SH: Hardly. [laughter]

PL: I think we did that already. The programs were based on something called the "excellence" monies that came from the state. At some point, the idea arose in the interactions between Bloustein and Pond, and Governor Kean and the state to have a bond issue … and it must have involved other higher education institutions in the state, probably, Saul Fenster from NJIT, and Stanley Bergen from UMDNJ, Harold Shapiro from Princeton, and Harold Raveche from Stevens Institute. Having a bond issue for higher education in the state in 1988, was the last major higher education bond issue that the state of New Jersey ever had. The idea was that the universities in New Jersey ought to be doing more to help New Jersey industry, and so the bond issue was to provide monies for higher education to help them help New Jersey industry. That's what it was all about, and it was called a "Jobs" bond issue, very cleverly. So, people voting for this were really voting for higher education, but it was for higher education to help create more jobs in New Jersey. Once the idea arose and it became clear that we were going to have a bond issue, the university embarked on trying to figure out how Rutgers could do things to help New Jersey industry more. Bloustein appointed a Committee on University-Industry Relations, which I chaired. This was a university-wide committee on business-university relations, and I was appointed to chair that committee. The staff member to that committee was Les Koepplin, who was also in charge of external government relations, particularly federal relations for the university. He was a great staff member, and we had outstanding faculty members from the sciences on that committee. It was a very good committee. … We had to figure out how Rutgers could help industry in the state. One of the things we did is a little survey of what industries there were in the state, and in what industries we could make the case that we could help. We confirmed that one of the largest industries in the state was the pharmaceutical industry. So we considered things to help the pharmaceutical industry. There was an electronics industry, a food industry, with Campbell's and Nabisco, and other industries. We considered how could we help them and we decided at the time, probably to some extent due to the urging of Malcolm Mclaren who was on the committee and who ran the ceramics program here (Ceramics is also a big industry in New Jersey). New Jersey has historically several ceramic industries. Thus, he said, we ought to set up centers based on an NSF [National Science

Foundation] model. Maybe, ceramics already had an NSF center in this area, but the NSF model was one where a multidisciplinary research center would be set up in the university in some area that related to industry, and industries in this area would be invited to join and take membership in the center. They would pay an annual membership fee, and, in return, they would get early notice of new discoveries that were made that they could use in their industry. Also, they would get free license to use any patents that the university would get in this particular area. So, that became our model. We decided in which disciplines to set this up. Obviously we only set this up in areas where there was sufficient New Jersey industry, that would buy into it and take membership, because that would provide a lot the basic money for the research programs of the center. The other feature was that the industrial representative of each member company (that paid money into the center) sat on the board of that center, and faculty members that want to do research in this area send a grant application for a research project, just like they would to the National Science Foundation. This board of industries then decides which of these projects would be funded. … There was a lot of concern on part of the faculty initially, when we started this, that, "Well, industries are only going to want us to do very applied stuff and I don't like doing that. I want to do basic blue-sky research in my area of expertise." … It turned out there was no need to worry about that, because industry didn't want the University doing very applied research because they wanted to do that themselves and get their own patents. They only wanted basic research. If there was something down the line that was, say, ten years in the future, that they weren't ready to invest in yet in their own company, they could pool their money with other industries and the university could actually do the basic research to study the fundamentals of that particular area. In fact in the long run this research could be of major importance to this particular industry. So, that's what we attempted to set up. I spent a lot of time going around and gathering together faculty members from different areas of the university and trying to figure out where we had the intellectual strength to create interdisciplinary research centers. The first one, well probably the first one we recommended was the Ceramics Center because of pressure from Mal McClaren, and because it was already sort of up and going, and it already had some idea of the industries that would join as members. Some of these Ceramic Center industries were New Jersey industries but the members didn't have to all be New Jersey. The ceramic center, it had members like Corning Glass from New York, and Pittsburgh Plate Glass from Pennsylvania. Other industries would join as members and that was just fine. They were supporting research here in New Jersey, and providing things that would help New Jersey industry, and maybe because of the existence of this center, some of them would, in fact, move some of their operations to New Jersey, or maybe there would be some discovery in the center that would allow a faculty member or somebody else to have a startup company here in New Jersey, and actually a fair amount of that happened. As a result of all this, you should know, the university, basically, dramatically increased its Office of Corporate Liason and Technology Transfer. In fact, the patent income, coming in to the university increased dramatically because of this. They've gotten many patents in the process. In any event, we identified, after the Ceramic Center, I guess, the next that we identified, that we really had to do because we couldn't but help, the pharmaceutical industry was something, was the Center for Advanced Biotechnology and Medicine (CABM), which was created jointly with UMDNJ, and is now a joint center, a big grand building over there. Aaron Schatkin was hired as its founding director and he's still there. He was brought down from Merck to be director, and they do research on areas that relate to biotechnology and medicine. It was been very successful. Another one that we set up was the

Center for Advanced Food Technology (CAFT) over at Cook. They got funding for a new building from Nabisco, actually, there was a lot of debate in those days because the owner of Nabisco was Phillip Morris, the cigarette company. They owned it, but Phillip Morris wanted the name on the building and we decided we didn't want that, so we put Nabisco on the building. The Center for Advanced Food Technology was set up, and generates many memberships from the food companies, mostly in New Jersey, but elsewhere. Then we setup CAIP, the Center for Computer Aids for Industrial Productivity. They actually have a new name for that acronym now. [Editor's Note: CAIP now stands for the Center of Advanced Information Processing.] But in any event, it was basically for the electronics industry. I guess those four were the initial four. Shortly after that, we created a number of others, such as the Center for Fiber Optics Research, and WINLAB [Wireless Information Network Laboratory] for wireless phone networks. The cell phone industry was just getting started, and they needed research, very interesting research on cell phones. You know, I mean, the early days, I don't know if you know how cell phones work, but there are transmitters and receivers located just in cells, and you have a very low power telephone instrument that only sends out a weak signal to the nearest cell. … This cell picks up this signal and, from there, it's transmitted by a land line that takes it throughout the worldwide telephone network. … The more phones you have, the more antennas they have to put up and the weaker the signal, because you don't want them overlapping between cells otherwise the frequency will be heard by more than one station, and so they'll get mixed up. So, it was actually … a very interesting system to research, and there's all kinds of complications they have to do of encoding messages, and whatever. Terrific research was going on there. We also setup a Laboratory for Surface Modification (LSM) here, jointly with chemistry and engineering. All of these were joint interdisciplinary centers, joint projects involving different departments. For example, advanced biotechnology and medicine (CABM) had people from Waksman as well as from various departments in biology at Rutgers and UMDNJ. It may even have had some researchers from Cook. The food technology had faculty from many different areas that do research that relate to the preparation and processing of foods; from the agricultural end of growing the foods to the actual processing, the rheology of foods.

PC: Would say, Merck people actually come down and do some of the research here too? Or was this all faculty driven?

PL: Mostly, not, but there may have been joint projects involving industrial people. Certainly, the Merck people were here and knew what was going on, and would collaborate with the people here. Often, they would also hire some of the faculty here as consultants, to go back and do something at Merck, or the graduate students upon graduation. I'm not sure but there were close relations set up like that, but I've sort of jumped ahead. These were, are, at least these four were our initial Rutgers proposals, and then it became more complicated because we realized this was never going to fly statewide if there were only centers for Rutgers in this proposal. That's why the CABM was proposed jointly with UMDNJ which was about the only thing UMDNJ got out of this. But Princeton got a center called the POEM [Center for Photonics and Opto-Electronics] center for research in opto-electronic materials and a program in such materials. NJIT got a center in manufacturing engineering that studied how you set up the most efficient manufacturing operations. We had proposals in many areas. … Then we had to do another follow up, and that is, we'd have to discuss once we had said that we planned to do this in food

technology only upon interviewing people at Rutgers, what industry thought of this. Was industry going to be supporting this? Thus, we actually set up a little research project in each area, with the Rutgers Business School, which in those days was only in Newark. There was something called an inter-functional management team, which was part of a masters degree program in business. Professor George Walters ran these student teams as research projects, and he would assign a team of about five students to each project, and they would meet with us and we'd tell them the kind of center we wanted to setup. … Then, they would do research on what possible companies there were in these areas. They would go out and interview people in all of these related companies, and they would actually give us a report on how successful this particular idea was likely to be. We would then have their report as support to the state for whether this was a good idea to do or not.

SH: Was there any funding from any of these companies?

PL: Yes, the study was to see whether there was likely to be funding in each particular research area. They were checking to see if the companies would be willing to pay a membership fee, and join one of these research centers. They were doing a feasibility study for each center for us, and it was accurate. The companies that they found were interested, were in fact interested. Many debates ensured though. For example, some of the companies that were most interested in funding in electronics, say, were Japanese companies. Should we let foreign companies, buy into centers, companies like Sony, say. They were allowed in some cases. … All of these decisions were made by the board once they were set up, whether they would allow another company to come in or not. These could not be formally setup until they had been approved by the state. Thus, there was a NJ Governor's Commission on Science and Technology that was set up after the bond issue passed. I served on a task force of the commission that was chaired by Ed David who was the head of research at Exxon Research in Clinton, New Jersey. … There was the NJ Governor's Commission on Science and Technology set up. I wasn't on the commission itself, I think that may have been President Bloustein. But I was on the Task Force of the New Jersey governor's commission on science and technology, which was basically to make recommendations on how this money was to be spent. We, at that point, had already formulated at Rutgers our ideas of the research centers that we would like to create, and had done lots of homework, jointly with the other institutions. Oh, another University, that was involved in many of these centers was Stevens Institute. We had met with faculty and administrators from all these various institutions in NJ, and basically came forward with a fairly unified proposal to this New Jersey task force that was chaired by Ed David, head of research at Exxon laboratories in Clinton. I don't know if you know that is a grand research center there. In any event, we basically managed to get them to endorse this idea of creating these research centers, and to accept how they were to be funded, and what … kinds of resources they needed. … The Task Force's findings had to be approved by the Governor's Commission and ultimately I guess by the governor. They actually funded new faculty positions for all the universities involved, for a very long period of time, anyway. When another governor came along much later, the university had to absorb these positions. We hired new faculty, we hired faculty after national searches, and hired directors for many of these centers.

PC: Most of them are still in existence today?

PL: Yes.

PC: Most of them still have outside members on their boards?

PL: As far as I know, I haven't really kept up with them, but as far as I know they still mostly do. They haven't all remained in existence, the Fiber Optics center at some point died out. Partly, it was because George Sigel, who was the director of that center had a very severe illness. Probably as important though, the fiber optic business has changed since the early days. They were then still needing lots of research on how to make better optical fibers. They were sending light down a tube, trying not to diminish it. So they had to very carefully make a glass tube very perfect without defects, then they had to clad it with the right kind of material, with the right kind sort of index or refraction and various other things, so that in fact you will actually get that light out the end of the fiber. They can make light go, I don't know, kilometers before it has to be amplified again. Some of the research on that was done here. We had a big tower for making fiber optics with all kinds of different conditions and for testing the fibers. But one of the things that happened, you may or may not know, is that very quickly the country and the world overbuilt the optical fiber networks, and so making better fibers was no longer the critical problem for industry. The problem then was that they had too much fiber optics, so they were less interested in researching fiber optics at that stage, and also George Siegel was ill so that center became defunct. On the other hand, WINLAB with research on cell phones is going very successfully still. So, you know, I mean, these things come and go, but they only exist as long as there's support for them. They can disappear. However, the other thing was that a lot of the money was needed to build buildings for these places, so the CABM [Center for Advanced Biotechnology and Medicine] got a brand new building, and there's a new ceramics center that was built, fiber optics had its own place. The food technology had its own center, the CAIT [Center for Advanced Infrastructure and Transportation]. Thus, these buildings that were built with money from this bond issue. So, the bond issue went also, the bulk of it actually, went into building buildings and equipping them with the kind of equipment that was needed for the research going on. That resulted in a big change, lots of buildings were built on the Busch campus, but they also built buildings in Princeton and NJIT and elsewhere. So, one of the things that Alec Pond recognized early on, … even though Rutgers, due to all the preparations we made ahead of time were leading this charge, and ended up with a lion's share of this money, we didn't dare do this alone, and so we had to politically bring along all the other universities in New Jersey, to make this a unified effort and we worked very hard at that.

PC: Do you remember if Seton Hall was involved?

PL: No, it wasn't. Seton Hall was not involved, nor Farleigh Dickinson, nor Drew, nor any of these other institutions. I guess, they didn't have very many faculty in these high-tech areas, and weren't so [interested.]

PC: I was wondering about Seton Hall because they are, they were responsible for … single handedly defeating the first bond issue that Rutgers ever ran.

PL: Oh.

PC: They opposed us, claiming we were a state university, and they lobbied strongly against it.

PL: No.

PC: In fact, they had their, they had Catholic priests all over the state of New Jersey preaching sermons against voting for the bond issue. I know this only because I've heard the story many times.

PL: No.

PC: The senior McCormick who was so furious, because at one point.

PL: No, what year was that?

PC: Oh, boy. That would have been I'm guessing in the 1960s.

SH: Would this have anything to do with the medical university at Seton Hall?

PC: You know, I actually don't know that. It could have, because of what happened with the Seton Hall Medical School. Yes, it could have, but I don't know. I just remember it was sort of the story I got told when I first came to Rutgers by McCormick. He had gotten, it was the one thing he was passionate about, he was so angry with Seton Hall for this.

PL: Well, … we hardly ever talked about Seton Hall, so I don't know, it was not my job anyway. My job was trying to figure out how to make these centers go, and we did spend an enormous amount of time meeting with people from NJIT, Saul Fenster who was the President of NJIT, Stan Bergen the long term head of UMDNJ, and Harold Shapiro from Princeton, and Harold Raveche from Stevens Institute, and we all, public and private research universities, collaborated together in doing this.

SH: I think that is just amazing. I never would have guessed, not many universities would even collaborate together over the same pool of money.

PL: … We all had the same interest. It was in all of our interests to do this, and it turned out the jealousies were not so bad because in particular we had done so much homework in New Jersey, we had here at Rutgers so much backup data as to why it made sense to put this particular research center here at Rutgers. We invited in many cases, faculty from the other places to participate in some of these centers here, just like, new faculty, well C-A-B-M [Center for Biotechnology and Medicine] was jointly run by UMDNJ and Rutgers. … The universities were invited if they had faculty in particular areas, for those faculty members to participate in projects in these other research centers that were setup. That's basically what happens at Stevens. Stevens didn't get their own center, but their faculty participated in some of these centers. In any event, we succeeded at least in setting up all these centers, and changed the university, that's for

sure. We were doing things that were more relevant to the industry in the State of New Jersey. We were certainly hiring good faculty, and we … arranged all kinds of new regulations in the university which allowed faculty members to set up startup companies. Well, the other thing we did is we created some place, some incubator space, that allowed and encouraged faculty, to set up, or others to set up new startup companies in areas related to the research, and several of those were actually set up.

PC: Well, general question that you mentioned in passing, and you as a provost and a physicist would know this best. How has patent policy at Rutgers changed over the time when you've been involved in physics? …

PL: Well, a specific formula was set up so that the patent royalties were shared with the faculty inventor and the department. A staff was set up to take care of the patent application, and to work with him, and to file all the applications. The individual faculty member doesn't have to spend a lot of time on this. Faculty were encouraged to bring new ideas for patents to this office of Corporate Relations and Technology Transfer over there. Then, staff would help the faculty prepare, and the university would actually submit the application for the patent. If the patent were issued, and if there were indeed some company or companies that wanted to license this patent, then the University would negotiate the license there would be royalties coming in. If the company would make and sell some of these devices, whatever they were, there would be royalties coming in. … First, the university would take a certain amount to cover their costs of applying for the patents, and related costs. After that, that's all profits if you will, and something like, I think it's forty-five percent of the money after that goes back to the individual faculty inventor who applied for the patent. So, there's something in it for a faculty member to actually do this. The rest of the money is divided according to some formula, part of it goes to the central administration, and part of it goes to, would go to the dean, and some of it comes back to the department.

PC: When was this set up?

PL: This was set up, well there was always a previous policy, but this new formula was set up during the same time in the late '80s.

PC: Yes.

PL: The corporate liaison office hired staff, extra staff, to help facilitate technology transfer, and to encourage it, and monitor it. Also, the university regulations on conflict of interest were changed a bit. There was a time when someone who was employed with another company could not also be a professor. That was changed in some way to allow faculty members to create their own startup company. Well, it's happened recently. For example, Katherine Uhrich (now a dean) has her own company. She invented a process for polymerizing medicines like aspirin, or opiate drugs, or other things. So, for example, if you had, for example, knee surgery, and you wanted to apply aspirin or some more powerful pain reliever for the pain involved, her company now makes aspirin into a polymer, that one can actually spread and coat in the area where the pain relief is needed, and it only goes to that particular area rather than being taken throughout

one's whole body. She developed a new process, and she now has created a the startup company based on this. We had a faculty member, named Venkatesan, in those days, in the physics department. He ended up leaving the university because our conflict-of-interest policy wasn't as liberal as that of the University of Maryland, so he moved to the University of Maryland. He had started his own company, called Neocera, to make these new, high-temperature superconductors. He had some new way of making these superconducting materials. Also there is Joachim Kohn whose now setup his own center on biomaterials. He's in the chemistry department and his company deals with artificial skin and other biomaterials. Thus, all kinds of things were invented after these changes.

SH: Has there been resistance from other faculty members? To not have this happen, I mean is there opposition?

PL: I don't think so.

PC: How about the patenting process, the policy itself. Is that entirely noncontroversial or were there fights about it? I mean, I can remember faculty meetings having endless fights about indirect cost returns and obviously a different problem, but it was a matter of continuous discussion.

PL: Well, if this had been the old days of Rutgers College there probably would have been, but in fact this happened at a time when we had almost no faculty governance. [laughter] … It was just implemented, and I don't think there was much discussion of it, other than with the faculty members that were very directly involved.

PC: So if you went to work at Michigan instead of Rutgers you'd still make about forty-five percent on a patent? …

PL: Well, all the major universities now have a policy something like this, and some are more liberal than others, and Maryland's was a little more liberal than Rutgers in what you can do in terms of setting up your own company. I don't really know the details, I haven't kept up with these.

SH: Does this help keep faculty from being basically raided?

PL: It did, and it also helped us attract some faculty from other places who would not have come if they couldn't have used their ideas to create their own company, which they made some money off of. It did cause some nasty court cases. A guy named Eli Snitzer, over in fiber optics in the Material Science Department and his graduate students invented a way to make an optical laser bendable. He put a laser into an optical fiber. He and his graduate student patented it on their own, privately, and didn't go through the university patent procedure. … One of the corporate members of the fiber optic center was AT&T, who wanted to use this process, and they were very upset because their impression was that if they joined this center they would get license-free access to the technology. Thus, the university, I think, ended up taking him to court, because he

didn't follow university procedures, and do it properly as a university patent. I think the university eventually won. …

PC: Do you remember, what was the name of the professor?

PL: Eli Snitzer.

PC: Yes.

PL: If you ask people over in material science they will tell you the story of Eli Snitzer, I don't know exactly what happened but there was a court case. [Editor's Note: Elias Snitzer was a professor in the Department of Materials Science and Engineering in the School of Engineering.]

PC: My source is always Karen Stubaus and she can probably tell me. …

PL: She may know something about this. The University Counsel office was involved in this, I'm sure. It's brought in a lot of money for the university. The university generally makes substantial amounts of money from patents now. Actually, amazingly, the most money we make from patents though is still through agriculture. At one time, something like seventy percent of the grass seeds sold in the world were varieties of grass that were developed at Rutgers. There's also the Rutgers tomato, and all sorts of other products that are patented and that they make money off of.

PC: Did you know Mark Singley?

PL: Mark Singley, yes, absolutely.

PC: He always told me stories about how much money came in from patents.

PL: Lot of money, yes, right.

PC: Okay.

SH: To move on then, when you become the provost this sounds like you've gotten the funding from the state to start these centers and all this, but when you're provost isn't that when, the years I believe are 1987 to 1992, isn't that really tough economic times for the university with the state?

PL: Well, the early part of that time it was still pretty good, and we were still hiring lots of people. In '88, '89, we hired that many people (shown in a table) with tenure in the university, just in New Brunswick in one year. [laughter]

SH: Wow, I'm looking at it, three columns.

PL: Three columns of people, so it was still a good time. For a short period of time, and then for a while after Bloustein died, it was really a good time. After that, I don't know if it had anything to do with Fran Lawrence, as much as it had to do with the economy of the State of New Jersey. Nevertheless, I don't think Fran Lawrence helped get resources from the State. The university was on very hard times after Lawrence came, and we had all kinds of budget cuts coming along, and I did have to administer substantial budget cuts in my last couple years … as provost.

PC: When you were provost, you took an active, sort of hands on role to hiring people in New Brunswick.

PL: Yes, fairly, much.

PC: As opposed to just leaving it with the deans.

PL: Oh, yes.

PC: Everything was cleared through your office.

PL: Yes, it was much more centralized then. However, since Furmanski has come, there has been this policy called "all-funds budgeting," which means that indirect costs from grants, tuition revenue, etc., reverts to the unit that generates it, according to a formula. You can have this table from the Faculty Newsletter if you want it.

PC: All right.

PL: In fact, you might want all of our Faculty Newsletters from those days. I'll tell you who can provide them. Her name is Thea Berkhout, her name used to be Thea Hoexima. She is now the Executive Director at the Bloustein School. … She has all of those faculty newsletters that we used to produce. But they're probably also in the University Archives, I suppose.

PC: Maybe, you never know.

PL: But it will [show] who we hired in those days, and at what level.

PC: Okay.

PL: So, it was, it was still a good time for a while. Many of those people were WCSL's amd HRRF's that we hired.

PC: Yes, I see Karl Morrison here.

PL: Karl Morrison was one.

PC: He would have been one.

PL: Yes, Karl Morrison was a WCSL. [Editor's Note: Karl Morrison is a Professor Emeritus of the Rutgers history department.]

PC: Yes.

PL: Okay, so we had a number of them in those days. So, we were still hiring them then, even in my early days as provost. That program was still running and it ran. Bloustein died in '89, so it certainly ran for my first couple of years as Provost.

PC: My memory in sitting in the provost office the one year I did, in hearing Karen and John in particular talk about the WCSL's, was that a significant number of them turned out to be busts in one sense or another, that they were senior scholars near the end of their careers who weren't producing as much as we thought they would, is that your impression?

PL: Well, I wouldn't say that.

PC: Okay.

PL: I'd say the bigger problem we had was like the problem we had in physics where many of them that we hired then got stolen away from us after we'd hired them. We hired them under the program, and brought them from some other university. For example, Nathan Seiberg was hired as a string theorist from Israel, I guess, and he wasn't here but a couple years when he was hired away by the Institute for Advanced Study in Princeton.

PC: Yes.

PL: Also, we hired Steve Shenker from Chicago, and he was here for quite a few years, I don't know, seven or eight years, and then he was hired away by Stanford. So, we several WCSL's to other places. That was one of the things that happened. Ann Markusen, who I think is probably on the list there was hired along with Norman Glickman into the Bloustein school, and she was hired away shortly afterwards. Thus, we lost a number of these fine faculty. I don't think I would say that they necessarily lost their luster. They certainly lasted a long time I thought, and it certainly brought luster at the time, and I frankly credit that as much as anything for our being admitted to the AAU, because we got the attention of all these other major universities when we were stealing … their major faculty. Many times when we hired somebody already at a distinguished professor level, they were already in the last half of their career, that's for sure. But the bigger problem, I think, was that we ended up not keeping them. … It was just impossible. These were real stars in their fields, and they were constantly getting offers from other universities, and some of them were going to accept those.

SH: They were productive while they were here.

PL: Yes, of course, but I didn't keep up with every single one of them. …

PC: Karen had a way of riveting out people who were not productive, because that was one of her concerns.

PL: Karen Stubaus?

PC: Yes, she would always talk about the people who were nonproductive.

PL: Nonproductive.

PC: We had some, I assure you.

PL: You had some in history?

PC: No, well, depends on how you define that but, yes. [laughter] … My memory was saying mostly the people she was really concerned of, this was a time we were going through budget crisis, and she was concerned about people who were making incredibly high salaries, weren't teaching students, and also weren't doing productive research because the way it made the university look, and my memory is that they were mostly in engineering but I wouldn't quote her or myself on that.

PL: Well, we had one in physics I guess, I would say like that.

PL: On the other hand this professor just won a major national prize based on his work before coming to Rutgers, even though, mind you he hasn't been doing anything really great for the last few years. He just brought a lot of attention to the university by winning a major national award of the American Physical Society.

PC: Eighty percent of the P-Is and IIs were getting grants on a regular basis. That was a pretty good batting average.

PL: Oh, yes. … We had a very good batting average there.

PC: A hundred percent of the young people, which I assume is the definition of a young person.

PL: Right. So, do you want to go on and talk about my time as chair? We haven't talked about that, I don't know.

SH: I think that is where we are.

PC: Is there anything else that stands out from your memory about being provost?

PL: Well, we have talked about reorganizing all the academic departments, and the creation of all of the professional schools.

PC: Did the problems with biology come after your term as provost?

PL: Well, I spent a lot of time as associate provost, trying to figure out what to do about the biological sciences, but this was because after the discovery of DNA, biology had to reorganize itself worldwide because, prior to that, biology had been organized as our departments were, botany, zoology, microbiology, etc. The disciplines were related to the kind of field studies that people would do, or the different kinds of experiments that they would do. Then, with the discovery of DNA, it was discovered that all life is very similar at the molecular level, and so biology got totally reorganized worldwide into molecular biology and biochemistry, and macrobiology, and physiology, and the people with jeeps and field trips, ecology. It was being changed at all other universities, and so we talked about various ways of reorganizing biology here. That happened to be happening at this same time as our other reorganization. I spent some trips going to other universities to seeing how they were organizing biology. At Stanford, I believe, they were actually building a new building for biology, and they were putting people that were all in areas of molecular biology, even if they were botanists, or zoologists, or whatever, on the same floor of a building, they were actually reorganizing them physically, so that they would interact in a different way than they had in the past. We talked about doing such things here, but we ended up basically just restructuring our biology departments. We also had a number of external reviews or actually joint external reviews of all the biological sciences to get advice on how this ought to be reorganized, and it was at that time we created a number of the new biology departments and did away with the old departments. We did some more minor changes over in agriculture. What they did over there was focus on applied biology, or biotechnology. We had sort of sorted that out, and there wasn't that much real fierce competition between the campuses because we had sorted out a turf if you will, for each area. In my view, the competition was exacerbated when the University did this most recent organization and Cook College was allowed to call itself the School of Environmental and Biological Sciences. This seemed to encroach on the turf of the biologists over here on the Busch campus and caused a lot of *Sturm und Drang* between the two places. Fortunately, this was after my time in the administration, so I could just sit only observe.

PC: Chuckle.

PL: And chuckle. … I think this naming was very confusing to the outside world, it was probably good for SEBS because of the confusion out there among high school students. If you want to study biology at Rutgers, where do you go? … I think a number of them probably now choose to go over there, thinking that biology is not necessarily here, and so I really don't know how biology is getting its message out to high school students, but that's what happens. [laughter]

SH: Off the record, I've been asked that question, and I can't answer.

PL: Yes.

SH: I tell them to go somewhere.

PC: One other question about your time as provost. I don't have any idea what the overlap is on this, but I have in my memory a series of particularly controversial faculty cases where faculty members did things which were academically either dishonest or whatever. Did any of those come to you office while you were there? I mean it was the Powers case, I remembered personally, because people hired.

PL: The Powers case was in anthropology.

PC: Yes, and then there was a guy in French who was teaching two jobs.

PL: Yes, it was the Villiers case. … Yes, that sounds right. The Villiers case was just before I came to the provost office, it was one we talked about a lot, but he was a person who had full-time jobs at both institutions. He was collecting two paychecks, and had arranged his teaching at each institution not to overlap with the other. Rutgers he would have his classes on, Monday, Wednesday, and Friday, and up at SUNY, or wherever else he was going, on Tuesday and Thursday. So, he would go back and forth, and he was doing two full-time things. … I guess he was de-tenured, or maybe he resigned in the process.

PC: I don't know. Did the provost get involved in these sorts events? Is that a provost issue?

PL: For the most part no, Karen Stubaus did though. They were mostly cases involving the University Counsel and the grievance procedure and the people involved in personnel got involved more than myself.

PC: Okay.

PL: The one case I was sort of a little bit closer to was the San Filippo case in the Chemistry Department.

PC: That is the lawn mower guy?

PL: [laughter] He was a very strange guy. He was using his graduate students to paint his house, and cut his grass, and that sort of thing, and rather forcing them to come do that kind of thing. He was paying these students. He had federal grants, NSF grants, or something, to pay the research assistantships of these graduate students, …or maybe they were post-docs. In any event, he would only pay for health benefits of one of his Chinese students, or post-docs, or whatever they were then. When any of them would get ill, they were all Chinese, he would have them go to the clinic or emergency room, or doctor, and claim that they were the student that had the insurance. [laughter] That was what really got him. It was illegal. I'll tell you a funny thing, afterwards, after he had been dismissed from the university, and still lived in the area, he lived in Highland Park someplace. Joe Potenza lived in Highland Park in those days and he, or he and his wife, were out trimming their hedge one day, and San Filippo came driving by very slowly, rolled his window down, and said, "You know, you can get a graduate student to do that for you." [laughter]

SH: Even after this. [laughter]

PL: Rhis was even after he'd been dismissed from the university, Potenza thought that was a riot. [laughter]

PC: What a story.

PL: The guy had a sense of humor. Well, he was quite a guy, I mean, I remember having several confrontations with him over his grants. But … when it came to the legal issues with his students, it did involve the department in a major way, and the department chair, and maybe the dean, but then it involved the legal counsel of the university, the central administration. My office wasn't involved directly in any of these cases. So, I knew about them. I certainly didn't have anything to do with Powers case, since that was anthropology, which was not under my jurisdiction as associate provost, but I would hear about it when talking to, I don't know, other people around. So, I was aware of the issue, but I had nothing to do with that.

SH: Are there other things in the provost office that you wanted to cover? Or as associate provost, before you go on to your tenure as chair, which was almost a ten year period, nine years.

PL: Oh, I don't know, there probably were, but I don't recall.

PC: So, how is it all that, I mean, the career path of most people who do administration is exactly the opposite of yours. How is it that you went to the provost, and then you came back to become a chair? That is just strikingly unusual.

PL: Well, it's because I resigned as provost, and came back to the faculty because I couldn't stand working with Fran Lawrence, but.

SH: You were the last provost?

PC: No.

PL: No, the next to last.

PC: Joe Potenza.

PL: Joe Potenza was the last provost. Joe was there when the office was abolished. It wasn't abolished because of me, I don't think.

SH: I didn't mean to insinuate that.

PL: Right, although I'm not sure Lawrence was particularly happy with me. I certainly wasn't very happy with him, but I more or less toed the line with him when I was provost. It's just that it got to the point where I decided I couldn't do that anymore, and rather than have a confrontation with him, I just quit and said, "I don't need this, I can go back and do teaching

research and fulfill things as a faculty member." I didn't need this, so. I just came back here, and the first thing I did is I went on sabbatical for a year, and got active in research again, published a number of papers. … Then, at some point, the department said, "Well, you shouldn't just do this, you should be department chairman." So, I was elected department chairman, so that's all I can tell you. So, I don't know.

PC: So is being chair in the physics department, my department, except maybe one time I can remember in thirty years, it's something you do because you are a senior faculty member who feels a sense of responsibility to this particular area.

PL: Well, I certainly was a senior faculty member that felt a sense of responsibility. … That was the only reason I did it. In a way, it was harder than being provost, because as provost, I had a whole staff and as department chairman, I have an administrative assistant. One of the things I missed very much as provost was if you had some idea you wanted to do this or that, you could mention it at one of the staff meetings and it would happen. Somebody would go do it, you know. I decided I wanted to create a faculty newsletter, and Thea would go create it, you know. Now, as chair, if I wanted to do something, I had to do it myself. I mean, unless I could talk another faculty member into doing it, I had to do it myself. So, there was that difference, but it was very enjoyable. It's a good department, and I had good relations with almost all of the faculty. There was one difficult faculty member in our department. There are always a few difficult faculty members that you have to deal with. One of the traits of a good administrator is, as Kenneth Wheeler used to tell me all the time, is that you have to be able to suffer fools. So, I had to learn to do that, but that's all. I had a good time as chair. Do you want to talk about that now?

PC: Yes.

PL: Well, I wrote down in my CVsome of the things that I did as chair, and so you have some of the things there. One of the things that was most unusual that hadn't really been done as chair, I should say, had to do with fundraising. I spent quite a bit of effort to try to identify donors to the department, and following up in a major way on any kind of a hint or a lead that some donor might exist. Almost, everyone that I found came from a little tiny bit of a lead that I got from one of our faculty members. Our big donor (we have a major anonymous donor who gave us 3.9 million dollars) had been an undergraduate major here, who went on and got his PhD at Princeton. This alumnus, as a high school student, grew up in the Trenton area, and came to Rutgers as an undergraduate. He was not from a very wealthy family, was very well-treated, was one of our best physics majors, and we saw to it that he did well, and he got admitted to a PhD program in Princeton after graduating, and he really thought Rutgers had changed his life. On the other hand, I don't think he thought that Princeton had treated him terribly well. He started his own company, and became a major success, and he was a wealthy man. In his first, sort of initiatives dealing with Princeton, he didn't think they treated him well, so he was not happy with Princeton. He had a summer house up in Vermont, where Peter Lindenfeld, one of our faculty members has a summer house. They met at a little party or reception or something up there. Peter was introduced to this guy at the party. They knew each other because Peter had remembered him from when he was an undergraduate. The alumnus had taken a class with

Peter, that's what it was. They got reintroduced there, and he gave some hint that he might be interested in giving some money to the university. We had no idea it would be a really large amount of money, but I then initiated an initiative to court him, and try to get him to give some money to the university, and did a number of unusual things. He was a great fan of women's basketball, and was always following the Connecticut women's basketball team, as you may guess.

PC: We'll forgive him that.

PL: What?

PC: We'll forgive him that.

PL: And you'll forgive him that. [laughter] … So, we arranged (we purchased) for him to get tickets to Rutgers women's basketball, and this was a time when Rutgers went to the Final Four and whatever. So, Rutgers was doing well, and he got very excited about Rutgers women's basketball at the time. But in any event, one day we had gone to visit him up in Connecticut at his home, and his company up there, and we invited him to visit us in the Department some time, it might have been the same day as a Rutgers women's basketball game, I don't know. Thus, he came to my office, where we had prepared a shopping list of things that the department might like. For example, we would like to have these undergraduate scholarships, and we would like to have this endowed chair, and we would like to have this or that. We gave him the shopping list, and the idea was to see if there was anything there that struck his eye. We very carefully had placed some cheap things and some very expensive things on the list. He looked at the list and said, "That's fine, I'll take it," and he bought the whole list. [laughter] … This was great, in fact, you should know one of the things we got, which is almost impossible to come by, was an endowed fund that gives us about forty thousand dollars a year for instructional equipment for undergraduate physics courses. That comes just every year, so … we're well-endowed for equipment for our undergraduate courses, and he gave us money for undergraduate scholarships. I forget how many undergraduate scholarships.

PC: One of them is named after Peter or something, is that right?

PL: Well, that one was for an endowed faculty chair in Peter's name, and it actually fell through because we have never hired anybody into that chair yet. But, he named several undergraduate scholarships after faculty he remembered, so there's a Noemie Koller undergraduate scholarship for female physics majors for example.

SH: Right.

PL: … There is one named for Herman Carr and one for Richard Plano and various other faculty. We have several undergraduate scholarships for the best undergraduate students. We already had one that was named for Richard Weidner, Dick Weidner, who you may remember, and it had been given by the family. In this case, he added money to the already endowed scholarships.

PC: Were these ones that were, were these professors he, your donor had had?

PL: Yes, he picked out professors that he had had. That's right. … One of them he named after was Herman Carr, and Herman Carr was very taken by this. Herman Carr, you should know, was a guy who kept every single record that he ever produced in his life. If you went to his house he had every newspaper on this or that. It's amazing, this guy … had a house full of junk that he had collected, but in any event, he still had his gradebook from when this alumnus had been an undergraduate in his optics course, with the grades of each student on each exam, and each homework problem, and whatever. Thus, he xeroxed this gradebook page and gave it to the donor. The donor was amazed to see this back when he was an undergraduate at Rutgers. So, in any event, he gave us whatever it says here, 3.9 million dollars.

SH: That is amazing.

PL: … He also gave us 500,000 dollars in cash for the SALT telescope. The building of the telescope was another thing that happened when I was chair. … There was an opportunity, we'd had had a number such opportunities to own part of a major astronomical telescope, but we had never been able to take advantage of them because we didn't have enough money to pay for our share of a major big telescope that was being built. Astronomy is a different field than, for example, high-energy physics. In high-energy physics, the equipment is built by governments, and it's always built with government grants like Fermilab, or now CERN in Switzerland. These accelerators are built by governments and any scientist in those research areas can apply to participate, if they're from the countries that built the particular apparatus. There are very few astronomical telescopes that are like that. I guess, the Hubble Space Telescope was built and put up there by NASA, and so you can apply for a grant to get time on the Hubble Space Telescope, but it's not like having your own telescope. You have to make an application for what you want to look at, and why, and how much telescope time it's going to take, and all this kind of stuff, and it has to be reviewed by referees and it takes six months to a year to get time on the telescope, so it's not something you do off the cuff. Whereas, if you have your own telescope, and you have some idea of something you need to do or some astronomical event happens, a supernova or something, and you want to go look at it, you can just go do it. You don't have to apply for time. Thus, in fact, the best astronomy departments in the world all have their own telescopes. Universities own the telescopes, and so we were never going to build an astronomy program here unless we had our own telescope. We do have a little one on the roof, but it is just used for undergraduate courses. The Schanck observatory was once used for our courses. Actually, the Schanck Observatory is being refurbished for the math-science learning center.

SH: Is that what it's going to be used for, because I just came by this morning and they were working on it.

PL: They're working on it. Well, talk to Kathy Scott. She's in charge of that. The math-science learning center is taking that over. There was one opportunity to become part of a major telescope called SOAR. It was being built in Chile, and we had been accepted as a member of that consortium, and I convinced Alec Pond to pony up the million dollars or whatever it costs to

buy a share of it. At the last moment, Columbia University, I think, voted against Rutgers coming in, and we didn't get the opportunity. Largely, because the Columbia astronomers wanted the extra time. They were already members but didn't want to share time on it. But in any event this project failed, so we weren't able to do that, but then there came the opportunity for the SALT telescopes, Southern African Large Telescope, an eleven meter telescope. It was for a time, the largest telescope in the world. It was being built in South Africa in an area called the Karoo, K-A-R-O-O, which is a high plateau desert area in the north central part of South Africa. It's an area that's rather like west Texas and New Mexico, very dry, with something like sage brush and mesas. This telescope is built on a mesa which is at an altitude of about a mile high, about the same altitude as Denver. It is a very dry area, so the sky is almost always clear, and there's lots of good viewing time, and the stars appear very bright. It's also, happens to be in the southern hemisphere, whereas most of the major telescopes at that time were in the northern hemisphere, because that's where most of the astronomers live. It also is on the African continent. There were some telescopes in Australia and in Chile, but there wasn't any over in Africa, and as the world turns there might be something going on, and you need a telescope over in Africa to take over. So, it had a lot of good things going for it, and we got in early on the project, and our anonymous donor gave us half a million dollars for this project. That was enough that we got a loan commitment from the university for whatever else we needed to buy, a ten percent share of this telescope, with some scheme of paying it back through the indirect costs on the astronomy grants that we would get. So, it was basically a loan from the university. … That was part of my role as chair, to negotiate a loan with the central administration, or to convince them that it was a loan, and not just a gift. In fact, it was built, it's now operating, and it's a great success. It has allowed us to attract astronomers. We now have one of the best group of young astronomers in the country, a really very exciting group. It's a very young faculty group in the department, and they are all working together as a team, and they're very good, and they're using this telescope.

PC: Paul, this type of question is going to show my total ignorance. When you say using the telescope can they setup something they want to do with the telescope from here?

PL: Yes.

PC: And get all the results here, they don't physically have to go there.

PL: Yes, absolutely. They don't have to go there, so in fact it's very nice. One of the problems with being an astronomer in the old days, was first of all, one could only do it at night, in the middle of the night. Second of all, one couldn't heat the observatory because the convection currents from the heat would destroy the image. Thus, it was always freezing cold, or a good fraction of the time it was freezing cold in the middle of the night when one had to do the observing. That's not the case now, I mean this telescope is computer-controlled, and so it operates in the cold by itself, in the middle of the night, up on this mesa in South Africa and its images are sent directly over the internet, and somebody sitting here in the daytime, upstairs here, can get the data in real time, right here. So, basically, the astronomers decid what they want to watch, and the computer actually (it's called queue scheduling) actually schedules it. One of the things you can't control is that you can only see it when its nighttime in South Africa,

and when South Africa is pointing in the right direction for this particular object in the sky, and so is visible from the southern hemisphere. These are all constraints that you have to abide by, but, nevertheless, you can get the data pouring in right here. Thus, they don't have to go to South Africa and get data. They don't even have to do it at nighttime, sometimes. … They don't even have to be there, it just feeds into their computer here, and they can analyze it the next day.

PC: Does Rutgers have an employee in South Africa?

PL: Well, yes, I think they do send a post-doc or someone down there regularly. … From time to time, one of our faculty will take a sabbatical there or something. We, I think, generally do have somebody down there to handle adjustments and repairs. In fact, they have a board that decides the policies on the operation of the telescope. For the last few years, Ted Williams, a faculty member of our department here, has been the chairman of that board, so we play a major role in that telescope.

PC: One other question about it, what you stated, what you wrote up, you mentioned that there was a program that they setup in South Africa that feeds a post-doc or graduate student up here.

PL: Yes, we negotiated it. In fact, I went down to South Africa, and we negotiated a program with Khotso Mokhele who was the head of their National Science Foundation in South Africa. His primary goal as the head of that, was to train South Africans in the sciences. When this was set up they didn't have enough astronomers to actually participate very much. I mean they owned half the telescope, but needed astronomers to use their 50% time. … Thus, they wanted more trained South African astronomers. They do have students that get their undergraduate degrees from the University of Cape Town or some other South African University. They maybe even get a masters degree. So, we setup an exchange program so that they would come up here as graduate students and get their PhD in astronomy here in the department, and then go back and become a faculty member or astronomer in South Africa. That was the idea.

PC: Do you, are those, the ones who come, are they mostly black or mostly white?

PL: I think they've all been black so far. I haven't kept up with it in the last few years. The original ones were certainly all black. The first one that came, actually it was too bad, didn't really make it. He couldn't pass our qualifying exam, but the next one, I think, did. … So, it succeeded after a while. It took a while to get it going and succeeding. They don't have a tradition of blacks going to and becoming physicists or astronomers or scientists, in South Africa, so getting a program like this set up and going was a major deal.

PC: What an accomplishment, yes.

PL: Yes.

SH: Was there any discussion about apartheid, here at the university, this is the going way back.

PL: Well, back in the days of apartheid there certainly was, that was a time of major student demonstrations. The students demonstrated and I guess, partly as a result of those demonstrations, the Board of Governors removed all the investments that Rutgers' endowment made in companies that did business in apartheid South Africa. That was early in the Bloustein times as I recall. Of course, those restrictions were all removed once apartheid was over, but Rutgers actually was in the lead among universities doing that in those days, as I recall. As a result of that, when we went down in South Africa to be a partner in this telescope, they were very happy to deal with Rutgers, because Rutgers had a reputation there for having supported them, the African National Congress and such, in their efforts back in the days of apartheid. Rutgers was very well known. Rutgers was in the forefront of that, I would say and it was well known in South Africa. … That served us well in this process, maybe a part of why we were so successful with this project.

SH: This also spilled over into the Graduate School of Education's exchange program as well.

PL: Yes, I would say so, so we have a good reputation with South Africa. What else do I want to say here. It was a good time for getting grants and things in the university, and rankings of the department were high. It was also a time when we built our physics major program at that time. I talked about that before.

PC: Paul, let me ask you, probably coming to the end of our time, but let me ask you, a question about your role in hiring as a chair. What does it take to bring somebody to the physics department? I mean, has, have you seen the way in which you have to bargain for people change over the years? …

PL: Well, it's very expensive nationally to hire people in certain areas, because you have to build very expensive laboratories for them here. … So, it costs millions of dollars to bring them here, and to get the laboratories set up. One result of that is that the Physics Department, and at one time to degree, all the science and engineering departments at Rutgers, were very heavy in theorists as opposed to experimentalists, because theorists just need a black board and a computer and they were much cheaper to hire. This department at one time was about fifty-fifty theorists and experimentalists, which was very unusual for a physics department. For example, we had our big initiative in string theory. I'm a theorist. We had lots and lots of theorists in different areas. In the experimental areas, how much it costs to bring them depends very much on the field. If you're a high-energy experimentalist, it doesn't cost so much because they're doing experiments at a government laboratory such as CERN, and that apparatus is built there by the governments. Mostly you're apparatus is there, so what you have to spend here is relatively less. The most expensive area is doing a condensed-matter experiment or solid-state experiment because it tends to be done by small groups, right here in little laboratories. Thus, we have to build some laboratories and obtain some very expensive equipment. We might have to have buy electron microscopes, some kind of magnets, or various other things to analyze samples. We may have to have very expensive computer controlled ovens and other things to make samples. If the physicist works in optics he/she needs all kinds of fancy optics and lasers and very stable tables for doing the optics. If they do very low temperature experiments, a lot of expensive equipment is needed. We have got people that have refrigerators that go down to essentially

absolute zero. When I say absolute zero, you can never get to absolute zero, but they get to within milli-degrees, thousandths of a degree of absolute zero. That's so cold that if somebody shuts the door, it raises the temperature of one's apparatus so, they can't have any vibrations in the building, and must be put down on the ground floor.

SH: Oh, really?

PL: I mean, there's all kinds of expensive things that have to be purchased and have to be built. These faculty regularly need a couple million dollars. Maybe the university has to do renovations, if they're going to come. Maybe, OSHA [Occupational Safety and Health Administration] requirements, requires that you put in hoods for the chemicals they're going to use. There are all kinds of things that we might have to do that cost lots of money. We've lost candidates because we couldn't come up with the money. My job as chair was generally to negotiate these finds. I generally found it was easier to hire a senior faculty member than a junior faculty member, because the senior faculty member already had lots of grants, such that they could use part of those grants to help build their apparatus, and we could convince the university that basically fronting the money to hire them was just an investment, because they would be bringing in all kinds of indirect costs to the university to pay this back, which it often did. Nevertheless, it takes lots of money to do these kinds of experiments, but that's what it takes if we want to do the basic exciting physics. Astronomers generally take less, although we do have our ten percent share of the telescope. To hire a new astronomer who's going to be using the same apparatus, or to apply to get time on the Hubble Space Telescope, or something like that, doesn't cost so much to start up. So, the astronomers don't cost too much these days. We did hire one once that did astronomy with a balloon. We'd send up one of these high balloons to go into the upper atmosphere with a telescope on it, and that took money. So, it depends on what they're doing.

PC: What about, this wouldn't come up in the same way in physics, usually. But in history we do spousal hires a lot. Now, you wouldn't have spousal hires in a sense most times with two physicists.

PL: Oh yes, for a time, we were among the top departments in the country in terms of couples that were in the department. We have, at the moment, I think four couples, so we have a large number of those.

PC: Do you also get requests periodically to find a non physicist's spouse a job?

PL: Oh, absolutely. … Those are very difficult because we have to find somebody that is at an appropriate level to be suitable to another department. They rarely succeed actually.

PC: Yes.

PL: We certainly have sent some offers out of that sort. I'm not sure we ever actually hired anybody like that, but we tried. We certainly have been turned down by other departments, who said they didn't really want that person. When I was in the provost office, I worked hard for

departments that wanted to do that, and at times we succeeded in finding all kinds of things. I remember when Bernie Kear was being hired in Engineering and Material Science, his wife was an artist, and she wanted a job in the Visual Arts Department at the Mason Gross School. … The Mason Gross School decided that she didn't have what it took to be a faculty member in their Visual Arts Department, but we ended up finding a staff position for her to organize their galleries. Sometimes things like that were possible. We certainly made a lot of effort along that line in the administration. The times we've been most successful is when we find couples both of whom are outstanding physicists, and we hire them in the same department. That's when it happens most.

SH: Are there any committees that you served on or that you continue to serve on that you'd like to talk about before we close this session?

PL: Well, I've served on many committees in the University Senate, which I mentioned there. I co-chaired with Barbara Lee from SMLR [School of Management and Labor Relations], the Faculty Affairs and Personnel Committee of the Senate. It was a very exciting time, where we created the scheme that is now used for reviewing deans every five years, which the Senate is now in the process of extending to vice presidents and presidents, you should know. The review process seems to have worked, and I think worked extremely well. In particular, deans that were not particularly well-liked, when it came time for their review, whether due to pressure from the president or the vice president, or just their own fear of being reviewed, often resigned just before the review was to take place. I consider that a success actually. [laughter] We didn't have to review them, since they didn't want the review. … I think the reviews have been useful, it certainly has shown us which of the deans are really very good deans. Good deans come out very well in this process and the process has led to the demise of deans that were not doing a good job. So, I think, it's basically been a success. I think you'd find that to be true. McCormick and Furmanski think it's been a success the way it's been done. It's been done quietly for the most part, although there was always an expurgated report that was given to the faculty of the unit, after the dean's review. So, the faculty generally knew what happened. I think most such reviews have included a survey by the faculty, and other groups has been very revealing of how the dean is doing.

SH: Even now with this, the reorganization, like there's an area dean.

PL: No, this is just for the deans. So in SAS, the only person that falls under this regular review would be Greenberg himself.

SH: Okay, alright.

PL: His area deans are just his staff, basically. He appoints those, and they serve at his pleasure, and that's a different matter, and they're not part of this process I suppose that somebody would conduct a similar review if you wanted, but it's not required. What's required is that each dean be reviewed every five years, so Greenberg will be coming up for review soon. I don't know if he's been here five years, but it's almost five years.

PC: Yes.

PL: … So that happens routinely. I served on one of these reviews. … I chaired the team that reviewed Marianne Gaunt, the university librarian. She was judged to be under this program.

PC: I served on the committee that hired her. I chaired the committee.

PL: You chaired the committee that hired her. I chaired the committee that reviewed her.

PC: There you go.

PL: Well, she got a good review. The other thing that our Senate Committee did did, which Paul knows about, because we interviewed him, is that we produced a document that still exists regarding best practices in the evaluation of teaching. I don't know the extent to which it's used by departments very much anymore, but it spelled out best practices and the evaluation of teaching. … We used, in fact, the great process that the History Department uses, and interviewed Paul about what the History Department does about evaluating teaching. We summarized other ways of evaluating teaching, and produced a document on best practices in teaching, which I think is a substantial document. It's not that everybody uses it. I think that most people don't even know it exists, but in any event, I think it was a very good study, and I'm very pleased and proud of it. Another thing I did was when I chaired the Research Committee of the New Brunswick Faculty Council. It was a time when post-docs were an anomaly in the university. The science departments mostly had post-docs, researchers that were grant funded. They weren't quite treated as employees by the university, and they didn't have any health benefits, and there were different categories of them. Some of them were grant funded, some of them came on their own money as, say, NSF fellows. There were several kinds of different categories of these folks, and basically we regularized that process, and created two or three categories of post-docs, and set up a regular healthcare insurance group for them, so they all had health care at least, and put them under the aegis of the Graduate School, so that there was somebody looking after them as a group. We set a limit as to how long they could stay as post-docs. If one wanted to keep them longer, they had to give them some kind of research faculty title, such as research associate or something. We regularized that process.

PC: That has really mattered, especially for us, because the post-doctoral world has spread in the humanities then it ever was before, and having standards really matters.

PL: We created those standards. So, I think that was actually a useful thing at least for a while. Harvey Waterman started looking after them, I believe. I think they may even have formed a post-doc association, but I don't think they're unionized yet.

PC: That will come too.

PL: That will come some day.

PC: Okay.

PL: In any event, we've regularized that process. We've done lots of other things but those I wrote about in my CV, so they stand out as important things. I have served on many committees for just about everything at the university.

SH: It also appears that you do a lot of public service committee work as well.

PL: Well, as department chair, we did, the department did a lot of public service. I don't know what you mean by public service.

SH: Well, I was looking at the different committees that were. Hold on. You were part of the Board of Directors for New Brunswick Tomorrow and the American Reparatory Ballet Company.

PL: Yes, I was on all of those boards. So, I've done that.

SH: I mean, nothing to do with science as far as I can see.

PL: … Nothing so much to do with science. Actually, one thing that is connected is for many years now, I've been a member of the Board of Trustees at Rutgers Preparatory School.

PC: There you go.

PL: Rutgers Prep, used to be part of Rutgers, and in 1958, when Rutgers became the State University, Rutgers Prep was spun off, and it's still a private prep school over on Easton Avenue over there. We're having a great time over there now. We're doing a lot of building, I don't know if you know, but it's changing radically the school.

SH: I can see the building every time I go home.

PL: Right, well, that's all happened during the time when I've been a member of the board. It's been an exciting time. I'm just a member of the board though. They always have had a liaison with the university, because they use university facilities, and they need university expertise from time to time. … So, I'm sort of their Rutgers liaison. I succeeded Dick Lloyd, do you know Dick Lloyd?

PC: Yes.

PL: Dick Lloyd was the previous Rutgers liaison, and then he stepped down and decided he had enough. … So, I was appointed after him, and I'm about to step down, since they have term limits. I'm in my last three-year term. So, I will step down at some point. However, it's been an exciting time doing that. I've also done several kinds of other public service. I'll tell you that the, this has nothing to do with Rutgers, but I was actually elected to the Borough Council of Millstone Borough where I lived. Millstone Borough only has about five hundred residents, and I was for a while the President of that Board, and one of my jobs was to be in charge of all the

streets and roads. If you take all the streets and roads in Millstone and add them end to end, they add up to only 1.6 miles.

SH: My kind of town.

PL: Your kind of town.

PC: Does this face a little bit to the west of us? Or face to the east of us?

PL: No, this is the place that if you go out Amwell Road (Hamilton Street) pass Middlebush, you will come to Millstone.

PC: So do you know Don Roden?

PL: Yes, he was my neighbor. I know him very well, yes.

PC: I have got the right place.

PL: Yes, he was one of my neighbors. I was on the Borough Council there, and I'll tell you how I got elected. It was very funny. One year, it's such a small town, they couldn't even find people to run for Borough Council. … So, it was the June primary election one year. There was nobody on the ballot running for the vacant Borough Council seat. … So, the only people that could be elected, were write-in candidates, and there was nobody running. Well, I got a very strange phone call one day, telling me that I had won both the Democratic and the Republican Primary Elections. [laughter] Because somebody had written me on the Democratic ballot, and somebody had written me on the Republican ballot, and I won both primary elections, and they asked me which line did I want to appear on in the fall November elections, and I was a registered Democrat, so I decided to [run as a Democrat].

PC: You honestly knew nothing about this?

PL: … I knew nothing about it. I do not know even who wrote me in. I have no idea. I had been on a number of the Historic Commissions and other things in Millstone but I had never been a borough councilor. Anyway, I agreed to do it. It didn't take that much time. So, I ran unopposed on the Democratic line in November. I will only tell you we had all kinds of things that happened. It was a great experience being on the borough council, and hearing all the complaints of the residents. We passed ordnances of various sorts, that we had to do, and primarily tried to figure out how to live within our budget. One year, there were two little old ladies that lived on Maple Terrace which is one of the little streets in Millstone, that came to us with a big problem. Their problem was that next door to their house there was a vacant lot, and this vacant lot was owned by somebody who lived in Florida. It seems he wasn't taking care of it, and the weeds had gotten so high that they couldn't see to get out of their driveway, and they wanted the Borough Council to take care of it. So, we had a long discussion about this, and solved the problem. Finally on the next Saturday, the Borough Council ourselves went out and cut the grass. [laughter]

PC: Local democracy, that's great. [laughter]

PL: Well, that didn't have anything to do with physics. … In terms of public service, the Department, one of the things that was started, I think it was begun while I was chairman, was the Christmas Faraday Lectures that we have here in the department each December. It's become a rather big event. Well it, I guess it was started at Christmas time, I think it's also done at Easter time, but in any event, it's also done now on Rutgers Day. … In our introductory physics classes, we show all kinds of fabulous demonstrations of the physics and so we've put together a number of these experiments, and a show, which is almost like a circus. It is put on several times a year. … Families and kids from all over the area come for these. It's become so popular that it is difficult to get a seat at these things now. Thus, we run many sessions of them in order to make it available to as many people as we can. We also go out and have shows in the high schools, and that sort of thing, and we've got a number of projects that involve high schools and other venues. The other thing that we began was on the second and fourth Thursday night of every month during certain times of the year. Our telescope is open to the public so you can come in the evening through the telescope, if you want to see the moon, the planets or something. Go to the Rutgers department website and you'll find the calendar, and it'll even tell you which objects you're likely to see this time of year. So, we began things like that.

SH: Do you have any other questions? I will thank you on behalf of Paul and myself and hopefully, you know, if you think of something else you'll let us know. We can come back.

PL: Well, I probably won't, I don't think about these things except when you guys are here.

SH: Well, alright, thank you again.

PL: Okay.

SH: An addendum to the interview.

PL: An addendum. When I was provost, Peter Klein was my associate provost for the humanities, and it was a time when we had this money for WCSL's and so we were hiring a lot of senior faculty members. … Peter led the effort to hire people in the humanities. Probably, people like Karl Morrison and other such people, he played a major role in that hiring. I mean, that was his job, as associate provost for the humanities. However, the thing he put his heart and soul into was to doing things for the philosophy department, his own department, you should know. He got, I think, many of his ideas and impetus from Ernie Lepore, who's a … very smart guy and a very good member of the philosophy department. … It all began with a big push to hire a philosopher named Jerry Fodor.

PC: Okay.

PL: … Jerry Fodor was the first real star that they hired in the philosophy department, and after that, they would hire Steve Stich and a number of other outstanding philosophers. These

attracted others and finally it led to what is arguably the best philosophy department in the country, but that wouldn't have happened without Peter. Many times I heard him coming to make his case for this or that, and I always supported him, and let him go. I thought he had good taste and Ernie Lepore did too. I supported what they did, but it was really Peter that brought that about in my office. It began, at the time I was Provost, at the time when we were hiring outstanding faculty. … That was a big payoff that came from … the hiring of WCSL's and that ultimately led to the growth of departments which at Rutgers had not been so distinguished before becoming among the best in the country. We now have a number of our departments among the best in the country, and started out with hiring in those days. So, I give a lot of credit to those WCSL programs. Whatever Karen says. I think they helped very much.

SH: Alright, I'm going to put this on pause to turn it off so, alright, thank you.

PC: Peter will tell you the stories about running the drug dealers off the campus personally. I mean it was quite a hairy story.

SH: We were talking about Livingston College.

PL: Have you interviewed Peter already?

PC: We're in the middle of it.

PL: You've done one session or something?

PC: We've got one session.

----------END OF INTERVIEW----------

Reviewed by Jesse Braddell 9/18/2011
Reviewed by Nicholas Molnar 10/7/2011
Reviewed by Paul Leath 2/21/12