Voices of Lebanon Valley College
150th Anniversary Oral History Project

Lebanon Valley College Archives—Vernon and Doris Bishop Library

Oral History of

Stephen Williams

Professor *Emeritus* of Biology

Date: May 9, 2014
Interviewed by Art Ford
Professor *Emeritus* of English and Alumnus, Class of 1959

Transcribed by Jessica Oliveri
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Dr. Stephen Williams, Professor *Emeritus* of Biology—From 1973 when he became a member of the faculty until his retirement, Williams experienced many changes in the Biology Department and College as a whole. In addition to his excellent record as a teacher, Williams became an international expert on the Venus flytrap and published extensively.

A: This is Art Ford, I'm here at the Lebanon Valley College library with Steve Williams, who's retired from the Biology Department at the College here—and we're going to talk a little bit about his experiences with the College over the number of years that he's been here. So, Steve, let me start with some questions about you, very factual kinds of things—what's your hometown?

S: I grew up in Kirkwood—well, I Lived in Pattonville, Missouri, near Lambert Air Field until I was 5 started with and then we moved to Kirkwood, Missouri, is where I spend most—the rest of my younger days, and then I went to Central College which is in Fayette, Missouri. They've since changed the name and now they now are a university, even though they're probably smaller than LVC. I then earned my master's degree at the University of Tennessee.

A: Was that in biology?

S: It was in botany—and then a Ph.D. in biology from Washington University, in St. Louis.

A: OK.

S: I had a postdoctoral at Cornell for two years.

A: OK. And what were your father and mother's occupation?

S: My father was a civil engineer and my mother was, at first, a housewife, and then she went back to school and finished a master's degree—oh, she was a teacher, she just had to quit when they got married which is what was done in the good, old days—and then she was a housewife when I was a young child and then went back to school, got a master's degree in political science, and was a high school teacher for the rest of her days.

A: Do you have any siblings?

S: Yes, two. I have a brother, Richard, and he's—well he got a degree in social work at Westminster College, but then he went straight and became a craftsman. He became a cabinetmaker and now became a partner in KC Strings—he makes violins and basses, cellos—and he's invented a number of things like the bass buggy. He does computer-aided manufacturing. He taught himself to do that without any formal training.

A: Pretty smart guy.

S: Yeah, very smart—but in a hands-on kind of way—he—I don't know if he would score high on the SAT. He would score high in making original patentable inventions.

A: You say you had another sibling too?

S: My sister, Debbie, and she's still in St. Louis, retired from teaching, she's been a high school teacher for a very long time. She taught high in the Science Magnet School in St. Louis. She was a mathematics teacher and then went back, got a master's in physics and she's been a physics teacher primarily. She married a physics teacher—they did all kinds of physics workshops and are active in promoting something called, 'Physics First.'

A: Is that for secondary students?

S: Yeah, in high school. The idea is usually they put biology first—'Physics First" promotes physics as the first course that students take.

A: Where did you go to high school?

S: Kirkwood High School and—for two years—and then Western Military Academy for two years in Illinois.

A: When you were at Kirkwood, what kinds of things were you interested in in terms of extracurricular activities?

S: I played football for a little while, but not much. I was not particularly successful—and, let's see, I did chess club. I didn't do a whole lot of extracurricular activities.

A: And then that two years you went to—you said military?

S: Yeah.

A: What—was that the second two years?

S: Yes, right. It was like a college prep school.

A: Oh is that what it is?

S: I—my grades were not super good and my parents were concerned that they did a good job in pushing me to get them up. I'm probably a tad dyslectic, and English teachers, they would say if you spelled three words wrong, you'd get an F—there's no way I was gonna not spell three words wrong (laughs).

A: So did they understand that at the military school?

S: Well, I don't know—but they—I worked very hard and had a very good English teacher and math teacher. I didn't care much for the science teacher, but the English and math were excellent—and the history teacher was very good. So I think I had more interesting classes, and that's all you could do—was study or go out for athletics or whatever.

A: And you said then you went to—where'd you go to college?

S: Central College in Fayette, Missouri.

A: Central, that's right, that's changed.

S: A small, small town.

A: Now a university?

S: Yeah, well, except it's not that much bigger. I think it's a branch of campuses in St. Louis and other cities. They went through the same hard time we did and they solved it by opening other campuses. They were really literally in the middle of nowhere. The closest big city is Columbia, which has got, University of Missouri (laughs). So, they had real problems, I think, about the time we did when I was there.

A: Did you go there to major in biology? Was that your first choice?

S: No. In fact, one of the interesting things about the Biology Department is, through most of my history here, nobody—none of us—majored in biology as an undergrad. You can't do that these days because they have so many absolute requirements in the beginning that you couldn't—you'd have to go an extra year—but—no I just—I came in undecided. I didn't have a major. That was the norm in our department. If Dale Erskine was an English major—and Paul Wolf was undecided, Susan was a Spanish major, let's see, Sid Pollick was a math major—

A: Al Wolfe?

S: Al Wolfe? I'm not sure in his case. I don't recall; at least the vast majority of us switched to biology. I took a biology course. I was interested in it, and in those days there were no baby courses for non-majors. Everything was a majors course and it allowed me to make that choice.

A: So pretty early on you got interested in biology.

S: Yeah and once I had the course I was interested in biology.

A: So that was the first one you actually declared?

S: Yeah, the first major I declared.

A: Were you interested in any extracurricular activities at Central?

S: Not a whole lot. I was—I always I was graded down for my spelling. I always had to make an A to make a B in about half my classes, so I worked very hard, and I really didn't do much extracurricular activity.

A: What year did you graduate then from undergraduate?

S: '64—and '66 I got a master's—and my Ph.D. is 1971. I was actually moved on to beginning my postdoc at Cornell, for a year while I was finishing a dissertation—and so it was '71 would be the actual official degree while I was at Cornell that first year.

A: Well, we'll move on to your time here at Lebanon Valley College. But before we do, is there anything else you want to add about your pre-Lebanon Valley years that you think might be interesting, for people to know about in the future?

S: Well—(long pause)—well, I grew up in the same town, Kirkwood, Missouri, as John Kearney [LVC professor *emeritus* of English], but I never met him (laughs). He went to Catholic school. He went to the elite Catholic school St. Louis U. High—and so even though we probably lived within a half mile of each other, I never met him.

A: And you're probably close to the same age?

S: Yeah, he was a year or two older than me.

A: How did you hear about Lebanon Valley College to come teach here?

S: Job books(?)—I was looking for jobs and there were—one of the things is that you apply where the jobs are—and there was one in Wisconsin and one in New Jersey and one here that I got interviews at and—the one in New Jersey, didn't appeal to me. It was a very beautiful campus—actually two in New Jersey. One was Seton Hall and one was—I forget—anyway, it was in a very posh suburb, that one. Seton Hall is an excellent school in a very depressing

neighborhood and the other one was—very nice neighborhood. I don't know if I could have afforded to lived there, but a depressing department of biology, 'cause they—one of the things they asked me, 'what do you want to do—teach or do research,'—well both! As if you couldn't do both apparently, so yeah, that was out.

A: But you could at Lebanon Valley so you chose to come here?

S: And the one in Wisconsin. I was offered the job at LVC and Susan [Verhoek, spouse and LVC professor *emerita* of biology] was still finishing up at Cornell so—I sort of—I decided just to take the LVC because of the—this convenience of it. Of course, I didn't realize then that it was a life sentence (laughs). You don't move around that easily.

A: No, not from then on probably, it became difficult. But when you arrived on campus for the first time, do you remember what your reaction was to—physically—the campus itself?

S: I think if I'd arrived now I would have been really bothered by it, but—because if you recall the old science building, now Derickson, you could look through holes in the wall. Literally, gaps in the mortar. You could see light coming in. The windows had an R value of approximately zero because they had metal between the glass in these great, huge Bauhaus windows, and you could hear the wind whistling through there in the winter. The fire siren on top—and yeah we had really, really good students.

A: Did you have good equipment?

S: We had mediocre equipment, but we did good work with it. The students were were as good as any we've had here. There were just a whole lot of them that took my class that were very good that year, including a lot that have gone on to do some important things, but they—it was—I guess I was just absorbed in what I was doing and I didn't notice the poor facilities—and

I was going up to Cornell every summer, so there's plenty of equipment there. Here I've always worked with students and did a little research. Back then we had a lot of space actually. Later, we built labs in Garber science building to mimic that—and students and faculty working closely to each other is something that I've always done and we've always done.

A: Yeah, did you realize when you came here that you would be working so closely with students—off and on an individual basis I think over there in the science building?

S: Well it's hard to think—that's what you do in graduate school with your professor so it seemed natural. Of course, at a large university of undergraduates, there are very few that can work that way. The vast majority of them are just undergraduates in these huge classes.

A: What classes did you teach at the beginning?

S: Here?

A: Mhm.

S: Well, we have the team taught General Biology course and—which was the largest course on campus. We all got one hour credit for teaching our part of it, so you had something like a hundred students (laughs). But then I taught labs in that—I taught plant physiology and—and then shortly after that Jean Argot left and I started teaching something called cell physiology, physiology is how plants or animals function. We covered cell function and biochemistry, and so I was teaching that and at that point Ann Henninger came—yeah, she taught an organismal physiology—she was more interested in the whole animal physiology—and so my course fit in rather well with hers, although I'd come from Cornell in a hot bed of heresy, where they were working on there was electrogenic ion pumping, which is something you probably don't know about, but it was not supposed to happen by the ordinary college textbook. At Cornell I was

sitting in the middle of all the people that were doing that proved that it was happening. Another thing—other heretical thing was oxidative phosphorolation—that's something of how respiration and photosynthesis occur. Both of those are now orthodoxy, but all orthodox things have to start out as hearsays—and when I started teaching them, Ann Henninger (laughs), who knew her textbook well, accused me of heresy—Paul backed me up (laughs), so I didn't have any real trouble.

A: Did you teach any other—any different courses over the years?

S: Yeah, now what happened was when Dale Erskine came in and replaced Ann Henninger, he taught animal physiology the way I would teach animal physiology, and I couldn't complain about that (laughs) 'cause he's doing it the right way—but, it meant my course in cell physiology was redundant, because I'd been covering that—and on the other hand, we didn't have molecular biology, which was just—well, it's taken over the world essentially—it's turned the world upside down, not just in biology, but in everything—DNA, you know, all I have to do is say those initials—and so, we didn't have a course in it and I worked very hard to develop a molecular biology course. Biochemistry was always taught in the Chemistry Department, and initially, there was a bit of friction between biology and chemistry. Chemistry's probably always been the strongest department at the College—music second, and—but Tony Neidig liked to poach the better students—and there was a lot of hostility there, and now I've seen it gradually disappear and Wally Patton is the end of it I think at this point. It was Wally and I that really pushed to get the biochemistry and molecular biology labs put together rather than build two separate empires and a wall between them—then you can share all the equipment, you can have better equipment, you can get along and cooperate, and that's what's happening now, so

if you go into Garber, that's what you'll see—and it's Wally Patton that had a huge influence and he's just a very likeable, easy to work with guy that's very smart and knows his stuff, and so it was easy to put things together I think, because of Wally.

A: You had said just a little while ago you had wanted to come to a place where you could do both teaching and research, what has been your research interest in your years here?

S: I always, from the time I was first doing my Ph.D., worked on carnivorous plants—and it's kind of a good topic to work on in a small school because it tends to be something that if you work on it at a big school, people don't take you seriously. People are very interested in like dinosaurs and carnivorous plants, but granting agencies do not like to give you money for it. It's the kind of thing that congressmen would bellow about. So it allowed me to do cutting-edge research and I could compete with Oxford University (laughs) and go toe to toe with Barry Juniper (laughs) and it was kind of neat, and students were usually interested in the plants and they could do original projects, although students and I worked on other projects as well.

A: But specifically, when you were doing this research, what did you do?

S: OK, well to begin with in my graduate school—Venus fly traps, when they close, have an electrical signal—that'd been known since Darwin's time and Sir John Scott Burton-Sanderson was one of Darwin's friends and Royal Society had discovered it in fact—but it'd sort of been buried and various people would discover it again, and pretend that they did it and would be very proud, but the sundew—which is a sticky haired carnivorous plant that you may or may not know—they got sticky hairs all over and if they catch insects and the tentacles actually move, move and bring the insects to the center of the leaf, so if one on the edge catches an insects, it gradually slowly moves to the center. And there are some now that have been

discovered to move rather quickly—but there's actually an action potential and nerves have action potentials—that's the electrical signal—then plants have action potentials—they don't have nerves, because that's a tissue—but they have cells that have action potentials and there's an action potential that travels down that hair to the base and when it reaches the base it bends, and I discovered that. In fact, I'd occasionally be at a meeting and asked what I work on—(they'd say?), 'well what do you do with them?'—well I discovered them (laughs). The project I was doing before involved electron microscopy of the cells and digestion After I discovered the action potental mediation of the movements I just ditched it and went with the electrical signals and got three large impressive papers in Planta, which is a major journal and then went on to Cornell with Roger Spanswick, who has just died—I'm gonna be giving a paper up there in a symposium in his honor.

A: Was he the other genius you referred to?

S: No, no—actually, Roger was very, very smart and he was very able. It was actually Rodrick Clayton who was just an incredible—he worked on bacterial photosynthesis. In fact, on his door, he'd say, 'have you thanked at photosynthetic bacterium today,'—but he discovered some key things about the reaction center in photosynthesis, some major important things, but he just—it was brilliant. And then—his wife died—she sort of held it together and he started using cocaine and that was a real lesson because he just became a derelict and his life went to ruin, he went broke, lost his house, lost his job, and there he was—one of the three most brilliant men ever known personally and—cocaine ruined him.

A: Wow.

S: So I stayed away from stuff like that (laughs).

A: Good lesson then. Did you stay with the research that you've been doing all through, are you still working on it?

S: Yes and no. At this point, I'm writing a book and I hope to get back to it actually as a series of volumes—but—and that would be part of it—I'm at the encyclopedia stage of life—and that—my hands are no longer steady enough, my vision good enough—the early part it was—if you had fine muscle skills—you had to have a mind but you also had to have good, fine muscle skills and good vision—and I no longer have either of those. But yeah, at Cornell I did. I put electrodes in individual cells and actually recorded that—and then at LVC, Frank Lichner and various other students worked on a whole bunch of projects that spun off of that, but then I also had a lot of students in the other kinds of projects as well.

A: Let's come back to the Biology Department itself. Has that pretty much stayed static over the years or has that changed in terms—not just in terms of personnel, but in terms of the interrelationships among people in that department?

S: It's evolved. There was a guy named Paul Hess that you may know, he was here about two years and then Paul Wolf came in. Paul Wolf built the department. He hired us all within the period that I was here. Paul, he didn't do a whole lot on the other side of campus but he was an excellent chairman. He used to say, 'a healthy ecosystem has a high species diversity.' He wanted people that would have different abilities, different skills, he wanted people—they all had to be good teachers, but he had different strengths—and we shouldn't all be clones of each other—and he built an excellent department. Initially, we had a real handicap 'cause we were a department entirely of assistant professors—went head to head with Tony Neidig in the (laughs) Chem. Department—and we were over in the Science Building, what's called

Derickson now, but we did well. It was an excellent department. I think we did a good job and ultimately, I think we took many students to succeed they might not otherwise have had. Well, medical school is a good example. F&M sends a lot of students to medical school, but if you look at the SAT scores in the high school position of F&M students—and then they cherry pick those and they won't even write a reference to somebody in medical school if they don't think they can get in. LVC—we'd have a student with a C+ average—we knew he couldn't get into medical school, we still wrote the reference. Guess what, our record wasn't good, but there were people that wouldn't even been allowed to be a pre-med at F&M that made it into medical school at LVC. So, it's hard to compare and ultimately I think we had a lot of cases where we actually made silk purses out of sow's ears and so—it was—we did get students to really—to paraphrase the army slogan—'be all I can be,'. You had to work hard or you couldn't be a biology major—and they tended to float to other places. Now sometimes, they were very able people. One of my first advisees at LVC was Paul Baker, he was a forestry major. He ditched us for English, now that wasn't because he was, in his case, a bad student—he was an excellent student, but he was more cut out to be the editor of the Lebanon Daily News than he was a forester. So some of it was that way, some of it was having enough energy or willingness to work. You could be average but you had to work (laughs)—and—or you couldn't really stay with it, I think—and we were old fashioned, old fogeys that always kept standards up and the grade inflation argument never made much sense in biology because we didn't inflate. I remember a student saying, 'I could have gone into Penn State, paid less money, and had gotten better grades' (laughs).

A: Would you say that was true in general across the departments, the school itself worked in that way with students and (unintelligible)?

S: I think LVC across the board, with maybe a—well, when I first came in there was some very weak departments. I think at the present time, those very weak departments are the most improved departments. I think at this point, there aren't any really bad departments. There were then but by and large the stronger departments at LVC always did make silk purses out of sow's ears. There was a heavy amount of that. Sometimes during hard times, administrators would be beating us up about attrition rates. We had a low attrition rate really—certainly overall. I don't know how we could have improved it much more.

A: Did you have to do very much committee work?

S: I did a lot—I don't know if I had to or not. I was on what was called it the Central Committee until communism fell (laughs)—and then they renamed it for some reason (laughs)—but I was chair of the Central Committee during John Synodinos' whole presidency—and I had a lot of interactions with him, it was always interesting. In fact, because I'd see he was doing something that was not making any sense, for one reason or another, and I'd go in and talk to him, and he'd blow his stack and he'd yell at me!

A: (Laughs) Really?

S: And then three days later, about half the time, he would be following my suggestions. He'd never say anything, and he didn't hold grudges. It was interesting how he treated some of the administrative people, he hated 'yes men', he didn't want you to go out and oppose him in public, but he wanted to hear your honest opinion even if he yelled at you—and he would—then take that into consideration and often—he was not stuck in his ways, if he ran into a brick

wall, he'd go around it—and we've had presidents that would keep running into the brick wall (laughs).

A: Well how many presidents did you teach under, who was the first one?

S: Fred Sample was first.

A: Probably towards the close of his career I would imagine? Because he was here about 18 years.

S: Yeah, probably the last, oh I don't know—eight years or something. He was here for quite a while.

A: Do you have any impressions of other presidents, how they worked with the College from a faculty member's point of view?

S: Faculty members—Sample—at first I didn't understand him at first, and then finally I realized—he thinks like a lawyer. He does everything on precedent; logic has nothing to do with it. Is there a precedent? Also he'd give these speeches that were nothing but quotes—and he'd quote Emerson and he'd quote some other person and—what does Fred Sample think about this? (laughs) I had no idea—he's so—on the other hand, he probably did more right than he did wrong—people were all upset that he didn't wring his hands and scream about how bad things were. That's the last thing he should have done in public. So, in a sense, he was doing the right thing there too.

A: So things were pretty bad back when this was going on?

S: They were bad—and—but—

A: In terms of enrollment or—

S: It started out beautiful and then the rollercoaster went down and the baby bust—the baby boom was what—where we were and I came in and it went down like that—and it was hard for everybody. And then they were playing the, 'zero sum,' game on faculty positions, it causes a lot of friction.

A: Who was the president after Sample then?

S: I think it was Peterson?

A: Was it? Yeah I think it was.

S: Yeah, well, it was [F. Allen] Rutherford for one year.

A: Ah, yeah.

S: And—

A: He was a temporary—

S: Temporary, yeah—and then Art Peterson—Art Peterson I like to think of as a great cloud of whipped cream who would tell you what you wanted to hear—and he kept talking about his good friend George Bush, which was the first George Bush, and apparently had been involved in Republican politics. He kept complimenting me and everybody else, but I don't think he knew us—and he made us into the leadership college and put guys like Leon Markowicz out on a limb because they moved him out of the English Department and then they removed the leadership department, they could have removed him. Fortunately for him, they found another home—but I—I would say—I think Peterson was sort of a neutral. He didn't do any real damage.

A: He was here only a short time too.

S: And he didn't get rid of a dean that he probably should have but—I think he was here when that started. Then—

A: Bill McGill was a temporary replacement.

S: Yeah Bill McGill was temporary.

A: And then it was [John] Synodinos.

S: Synodinos—and Synodinos was an excellent administrator—he didn't have a Ph.D. and that was always something that he worried about and I think too much—and because he ultimately—well he had a bunch of the administrators and instead of shoving them out, he would find a place—he would find the square hole for the square peg and a round hole for the round—and he moved them around a lot. He found people like Deb Fullham in some lowly position and scooted her up to a very high position because she could do what he wanted. He was able to move his chessmen where he needed them and played a pretty good game—

A: Was the faculties' reaction to the fact that he didn't have a Ph.D.? It's very unusual—

S: It is unusual, and I don't know—I don't think it bothered me much and I don't think it bothered the faculty and I knew really well much—the one place it seemed to be a problem was he was hypersensitive to the staff that had been in positions he was in and kept trying to, get them in the faculty lounge and things like that where they didn't really feel comfortable—but I think every president we've ever had and every dean we've ever had, came from someplace else and one of the first things they often do is try to cure the ills at the place they came from—and that was one of the ills where he came from (laughs), so he was curing that. But he—his great strength was his flexibility—the fact that he would evaluate the data, look at it, and act on the data instead on some ideology. He used the data to determine how he'd act—and that he did what he should of done, I think, maybe I'm thinking too much like a scientist, but the data ought to mean something—and you ought to be acting on it instead of using it like

a lawyer where you've got your advocacy and you use the data to support the thing you're advocating—and too often it's that way with administrators. John actually thought using the evidence and acted on it, he did a very good job.

A: Do you have any reaction to—it would be [David] Pollick next and then I guess Steve MacDonald after him?

S: Pollick—he (long pause) was a little too slick—he was the absolute opposite of a Pennsylvania Dutchman. Pennsylvania Dutchmen are hardworking and somewhat lowbrow. Pollick was at least put on the highbrow pretense—and so he's almost guaranteed to not get along with the locals. He fired a coach for winning half his games and replaced him with a coach who went and lost all his games (laughs)—and who—I had an advisee, the coach he replaced him with told he didn't have to go to class because he had a concussion—and his grades went from A to F—I got together with Rosemary [Yuhas, dean *emerita* of student affairs] on that one—oh, and the physical therapy program, which I almost thought a good idea, but there was some opposition—and he was gonna force that and we were supposed to vote on it in principle. I was on the Central Committee—and it's like, well we can vote on it and just vote on it as an issue, we should, he didn't have to follow our vote—but we'll vote on it, and he can't stop us from voting on it, and so we did—and it passed—and I was for it, I voted for it, but by God—this principle stuff is an end run.

A: Well let's talk—sort of broadening things out a little bit now—because you were here a good number of years and a good portion of the College history itself, of course, you and I both lived through—were there times, you hit on this a little bit, but were there times that you feel, looking back now, were the most exciting times to be at Lebanon Valley College?

S: (Long pause) They were exciting in different ways. I really had the most fun when I was doing work with students and there were several periods when I had great successes of that early on—and then I got a grant—the NSF-, there was a—what do they call it—anyway—I'm trying to remember the name—it should be coming to me right away—anyway, we got a considerable amount of money and we could set up research projects within—it was—NSF Triple A.S. Grant I think it was—and it—I was principal investor, we got three years of money, and we were able to fund student projects—and we were just newly into the science building and we got a lot of nice equipment—and I had groups of students working with me—and we were doing really neat stuff on modeling proteins and so forth—one of the students, Lance Westerhoff, went on—he's in—now in a start-up and he's modeling proteins, he went on to Penn State in computational chemistry and he—he's gonna be the student that either becomes a multi-millionaire or—these days I guess it's billion—or goes broke, I don't know which—but one of those two. He's a real entrepreneur. I mean, he really shined—and it gave him what he needed to really get started in that, and I also took him up to Cornell in summer with me a whole bunch of times and he learned a lot there.

A: Did go to graduate school at Cornell then?

S: No, he actually went to Penn State in computational chemistry, but he went up to Cornell in summer, and it was there—first of all, he took a course in entrepreneurial stuff on the side, just sat in on it, but also he began working with Tom Oorndorff up there and doing this kind of—and realized, 'I need to know math.' He spent an extra year here picking up a second major in math and—'If I'm gonna model this stuff, I really have to be able to do math right,'—and so he became a double biology/math major and got very serious and then went on in computational

chemistry at Penn State—and his papers—I have trouble reading them—it was really some very heavy physical chemistry in there.

A: That's a great story about that one student—and there are a number of other students that would be, to some degree, comparable to that (unintelligible)?

S: Yeah, Frank Lichtner went on too. He was very early on—he did that paper on how Venus fly traps have the action potential, they also have a hormone that's keeps traps closed when they capture prey—we were working on what chemical stimuli cause them to close. That was published in American Journal of Botany, with him as an author. He went on—he did go to Cornell for grad school, and then he went to Dupont. And well, actually first of all, he's assistant professor at Davis, and discovered an assistant professor can't live on his salary in Davis, California, so he went to, as a scientist, at Dupont and found that a scientist in Dupont can live very well in Delaware on a scientist salary (laughs), so he was there for years and worked his way up on the hierarchy—actually went to France, I think, on some project for a while, then left Dupont, was working with a company in the West somewhere in irrigation, and then came back to Dupont to where he is now as a consultant. But he's very involved in LVC now that he's back.

A: What's his name again?

S: Frank Lichtner, L-I-C-H-T-N-E-R.

A: Oh, sure—

S: Yeah, I don't know if you remember—

A: I do remember Frank. Well, let's say I turn this around then—these are—I asked you about the exciting times and pleasures that you had and so on—were there times when you were

most—were you—embarrassed might be too strong a term—but when you found it a bit depressing here at the College?

S: Within the department, it was not depressing—ever.

A: But the College?

S: The College-wide? I guess—Richard Reed—I always thought "the College is the faculty"—I believe that and Richard Reed convinced me that the College was the administration—and I worked very hard because I believed the College was the faculty—and I worked less hard at some of that stuff after he convinced me—that is the last thing he should have wanted to convince me about, but he did—and I got less convinced of that later, but you know, it's—I think administrators, if they're smart administrators, don't want to convince the faculty that the College isn't the faculty, because they want—they pull to your stake out of it and that's not smart.

A: Yeah—so that was a fairly depressing time then?

S: That was—at the College-wide. At other times, it was almost—I guess—I wouldn't—it was depressing, but they would fight over these curricular things, and we'd change curriculum something like—what, four times or three times at least within a number of years—

A: Within five years.

S: Yeah, and I really—at that point, students should not see more than—one curriculum change in their time as a student or they'll—I mean, legislation in curriculum is something you don't want to see made at like the sausage (Laughs).

A: (Laughs)

S: Ultimately, it's pretty good (laughs)—how we come about it is not pretty.

A: Well, again, broadening this out at you a little bit further—you're now retired, looking back over your career at Lebanon Valley—all the students that you worked with, faculty you worked with, and so on—how would you like to be remembered by those people—and probably particularly the students?

S: Different students in different ways, I guess. I mean, some of them definitely—I had an influence in doing research with them—and in other cases, you know, they went on to veterinary medicine or they're doctors or they're—some of them are—you know, we've had good, solid C+ students, they're out selling pharmaceuticals—and doing well at it—and so, in their cases, it's more of a liberal arts thing—because I was—I hope that I, in some cases, gave them some of the underpinning in understanding the biology that they need for their field, but, in all cases, I hope that I gave them a picture of science, what it is, and a perspective of how biological organisms work. Often students interested in medical areas only want to learn about humans, and yet you get this idea of cells as very delicate things—in fact, cells grow in hot springs and live—and cells are not necessarily at all delicate, if you look at the whole broad range of life. Some of these esoteric things like cells that grow in hot springs, that are useful tools—a lot of the DNA work is done with enzymes that come out of hot springs bacteria. So there are tools that come from those. In addition if you if you just think of life as only being like it is in a human, you get a very narrow view of things and it's the liberal arts aspect of biology really—teaching the broader picture, and for somebody who's in English literature, it might be—seem that it's narrow, but it's very broad, relative to just looking at humans.

A: And one final question then—what would you say to the question, 'What over the years—what has Lebanon Valley College meant to you?'

S: It's always had an aspect of it being a family—when I came here, there was, for better and for worse, paternalism. This has its good aspects and it has its bad aspects. First, there was some—I remember Dave Gring not wanting to go to the Methodist Church around the corner 'cause people would be watching him (laughs), and he didn't want that so he went to a church in Palmyra. But on the other hand, I think they tried to look out for us in a paternalistic way too—it's become less so, and for better and for worse. I always went to the faculty lunches, I'm sad that they've discontinued that—'cause you could sit with Music Department people, and I learned a lot by just discussing things with them. You got a broader perspective. I had friends in many departments—and then there's a comradery among colleagues that are associated with the College. The students, and particularly the students that I worked with closely, would, I think, remember the faculty fondly, sometimes not so fondly (laughs). I think by and large—

A: So do you remember it fondly or not so fondly?

S: What's that?

A: The College.

S: Mostly fondly. I think—I don't think there's a great deal of negative things, there's always been disagreements, it would not be a college if there were not—and if there were humanities people and science people and social science people all thought exactly alike, or even different humanities people all thought alike, it wouldn't be a very good college I guess (laughs).

A: Okay, well I think we'll end it at that point.

S: OK.

A: Thank you very much Steve, interesting discussion.