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Firsching, F. Henry - Oral History Interview

Southern Illinois University Edwardsville

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ORAL HISTORY

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SIUE ORAL HISTORY PROJECT

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F. Henry Firsching Interview, August 28, 1991

Interviewed by Stanley B. Kimball

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Q: Professor F. Henry Firsching, Department of Chemistry, long time colleague at SIUE, thanks for dropping by this August 28th to share your memories and reflections of pioneering this place. Henry, why did you come to SIU in the first place?

A: Oh I came to SIU because I was at the University of Georgia and I was pretty unhappy with the situation there. We had just integrated with blacks for the first time and this was a cause of real dissention between northerners and true southerners including the chairman of the department who was a true southerner and so I made no secret about my views on this and I felt as though I was inside on the outside there and I wanted out plain and simple. Here was a good space. I didn't want to be in a big metropolitan community. I wanted to be out in the country somewhere. I wouldn't even apply in places like New York City and Philadelphia and Los Angeles.

Q: You came here in '63. Did you come to East St. Louis or Alton?

A: Oh I went to Alton in the old Shurtleff College.

Q: How did you know of the opening?

A: I believe I picked it up in *Chemical and Engineering News*. I'm almost certain that's where I got it. In fact I think, I think if I'm not mistaken, I believe they replied to me. I think I put an add in *Chemical and Engineering News* and they replied to my add. I'm pretty sure that's what happened. I'm not positive, but I think that's what happened.

Q: I came in '59 so I have a few years on you, but you still qualify as a certified pioneer.

A: Pioneer. See when I first came on the job interview, they showed me this area right out here where the campus now is and there were stakes in the ground. When I came here permanently around the end of August/first part of September, the first construction had started during that period. So I saw before the first building had ever been started on this campus. I saw the old farm country out here.

Q: And you have seen it grow into what it is today obviously. Why have you stayed so long?

A: Oh well there's a very interesting little thing why I did stay so long is because this was a very satisfactory position until about the early eighties. Somewhere around there things started looking what I call downturning and they have been going that way steadily for about the last 10 to 15 years. Something like that.

Downturn, by that I mean, library holdings were held back, the funds were diminished. You know all the problems that were associated with that particular thing. When I first came I was told, or misinformed I should say, that we would have a doctors program within a few years. After I had been about ten years I realized that was a hopeless dream, and then you get another problem when your over fifty you can not move not in this business, you simply can not move.

Q: Our mobility declines especially when we make full professor.

A: I made full professor quite quickly when I was here. I think 6 or 7 years.

Q: Well I may, we may come back to this because as you know one question I'm going to ask is about frustrations.

A: Oh plenty of those.

Q: Terrific. But just a moment on that. I want to come back and be sure I ask the right question. You came in '63, that's 28 years, I'm not sure I understand why you stayed so long.

A: Basically speaking this is what I really wanted to do more or less. I didn't like the organization because it was big. I wasn't interested in that. I would have liked to have a doctor program here in chemistry. I really would have. There 's no question about it. But we never did get to that. I always found the teaching as a very

stimulating thing for me. I always enjoyed doing it and still do. No question about it. Conveying information and simulating information and putting out information. Certainly is my cup of tea. I like doing it, plain and simple.

Q: Well I presume that you feel you've been treated well.

A: No. Oh no, no. In fact I would make a statement I've said this many times to many people that I managed to accomplish things on this campus in spite of the organization. No kidding. No I feel I have been really short changed in many many aspects of my profession endeavors.

Q: There must have been some attractions for you.

A: Oh I don't want to minimize the fact that this was what I wanted to do. I didn't want to get into big metropolitan areas. I wouldn't even apply for New York and Los Angeles. I wouldn't even think of doing that. Finding a place that's reasonably distributed in the country and so forth is difficult to do. I definitely did not want to get into a big metropolitan area.

Q: Well I now live in Edwardsville and I feel that we have the niceties of a small town and a big city not too far away.

A: That's right. Within an hour I can get to any big event I want whether it's - like we go to the symphony. I can be over there in an hour from home. It's easy. That's fine but again the problems of the big city are away from - the other side of the river and so forth.

Q: Yes. That's a very good point.

A: I live out in the country. I've got about three acres in the back. I wander around in my own little woods - nice, peaceful quiet. I mean, my heavens, it fits a lot of my needs no question about it.

Q: You were in Georgia at the University of Georgia...

A: That's right.

Q: Where else were you before you came here?

A: Well I've worked for two, as a matter of fact for three industrial organizations. I had worked for a Skenandoah Rayon Corporation and that's not Shenandoah. That's Skenandoah ... I worked for Cowles Chemical Company and that of course was primarily detergents. And then I worked for Diamond Alkali Corporation for about three and a half years in Ohio with my doctors degree - these other two with the masters degree. So I had had about five years of industrial experience and roughly, what was it, I think Georgia was five years at Georgia as an academic person before I came here.

Q: So you know both the worlds, the real and the theoretical world.

A: Oh yes and the real world had some problems,- fantastically more difficult than the ones we have in the academic area. Oh fantastically more difficult. Too many knuckleheads in the front office is what I would say without any hesitation. I mean really.

Q: Well now - you mentioned you've been in - you've gone into academia. You've stayed into academia. You've enjoyed teaching. Now let's be a little more specific. What would you consider one, two, three your most significant contributions to this university?

A: Oh well one of them was I developed a course, The Origins of Life. I don't know if you're familiar with that or not.

Q: Was it General Studies?

A: It was. I taught that as a course in chemistry without too much success. So then we incorporated with Bob Wolf of the Philosophy Department.

Q: Yes.

A: We taught that for about, oh something like six years I'd say. And that was an extremely interesting thing to teach and a very interesting thing to develop. And I feel really very pleased and proud about that particular situation. It was a very worthwhile contribution.

Q: That would have been of course combined as philosophical and scientific versions of the origin of life.

A: That's right. See I'll give you an example of why it was so interesting in its own way to teach it with two people. I remember we were talking about evolution and I said, gee I said, we've got so much more information, data in terms of evolution and they've got so little. And Wolf says, yeah but if we want to believe their stuff, we've got to throw all of this away and he looked it with a slightly different pattern. You know what I mean? We're looking at the same information, but we're looking at it in a different way in a sense and that's what happened throughout the course - the same information but a different approach to the same subject. It was very interesting, an interesting educational experience for me and it probably was for Bob Wolf too I suspect.

Q: Any other...

A: Oh yes. Now in terms of that I've also been active in research ever since I've been here. And I've probably turned out somewhere around ten, fifteen scientific publications since I've been here and some of these are noteworthy. They really are. At the present moment I'm quite sure that I have the best separation of barium and strontium ever achieved. You may not be familiar with these two but there's magnesium, calcium, strontium, and barium in the periodic table. These are very tricky to separate. I think I've got the best separation that's ever been achieved. That's so good that I think anyone would have an awful time doing better than that. If it's possible. I really don't know. It's just about as good as you can get.

Q: Reflecting my ignorance, what happens?

A: Well you see we always have a problem in chemistry. If you've ever walked into a chemistry stock room, we have a bottle containing sodium chloride and potassium chloride and magnesium chloride and calcium chloride and so on and so on and so on. Well how did we get these to be pure? And of course what you have to do is to separate them from everything else. So one of the basic steps in chemistry is to prepare the pure compounds. It's just fundamental stuff.

Q: Now even I am aware of that.

A: Now the more efficient your separation step is, the cheaper and more accessible the pure chemicals become. You see it's very fundamental. It's a very fundamental situation. So I developed that on this campus by the way.

Q: Now I understand that that's supposed to go under the pay off in space is that pure and perfect weightlessness brings purer...

A: Certain types of crystals will grow there that you can't grow here because of the effect of gravity. That's quite rigte.

Q: You get rounder ball bearings or something.

A: That's right. You don't get the distortion of the force of gravity. If the force of gravity is eliminated, you get some properties that you can't achieve when the force of gravity is being felt.

Q: Very interesting.

A: Now that's not the only achievement.

Q: Go on.

A: I also was very interested the rare earth elements because when I...

Q: The what?

A: The rare earths. These are called the lanthanides . There are about 17 elements and that's about one sixth of the entire periodic table. After I was working on strontium and barium, I said, gee now what's the toughest separation on the periodic table and I decided it was the rare earths. And I says well I'm going to see if I can't separate those things using the same general principles I had had for separating the barium and so I worked on that for a very good many years on this campus and I haven't got the best separation of the rare earths I might add because this was done before I ever got into the business but it's called ion exchange.

But in order to do an ion exchange separation, you'll need something like a million dollars worth of plumbing and pumping and valves and everything else to do this. Now the type of separation I made is with precipitation and I probably achieved something like a hundred to a thousand times better than anyone else has accomplished in this area. I've gotten a couple of patents from that and it turns out that you don't need anything fancy. A hot plate and a beaker is all you need to do the separations I'm talking about. And in a batch operation I think mine is by far the most efficient with factors of a hundred or a thousand beter that anyone else has ever achieved. I'm really proud of that one. That is a really tricky business, a really difficult business.

Q: Any more of your contributions to the university?

A: Well there's also another very significant one about roughly 11 years ago, I guess it was. The funding for research just essentially did appeared on this campus. It was so small it wasn't even worth bothering with, is what it amounted to. By the way we have an awful lot of, what I call hoop jumping on this campus. If you jump through this hoop and if you jump through the hoop without touching anything you will get rewarded with a prize or something like this.

And of course I get pretty tired of this hoop jumping because it takes so much time to make these proposals. In fact I'll bring up a statement by a fellow named Szilard. He was a very famous atomic scientist during WW II. During the Manhattan Project, where they built the bomb. He was approached by security agents during the war and said is there any way of which we can tie up the German

scientific group and so Szilard thought about it a couple of days. Called up and said yes, you get them writing grant proposals 100% of the time. Well, we don't write them 100% of the time on this campus, but they want you to do it something like 20 or 50% of the time and that is a total waste of effort as for as I'm concerned. Really, it is a big mistake. I have very short fuses on participating in this.

So what I did, I decided to try writing a newspaper column and I talked to Gary Murphy. Remember Gary Murphy? He had a column on English. I remember particularly when he talked about Argentine. When Argentine had the war with Britain. Argentine rhymes with latrine. He had beautiful humor. Just beautiful. I talked to him about it and he said, sure he said, I think we need something like that on this campus. He told me to see Sam Smith and so forth. I started writing a newspaper column and I really know nothing about writing. I never had a single course in any of this journalism or so on.

So I stumbled around in there for a while and then I went to a Chatauqua conference. They have one in the fall and one in the spring and it was on news media and science and see that's exactly what I was interested in. There I realized th at they have some of these two and three minute radio shows. That's why I decided to make a radio show and newspaper column combination and I've been doing that now for 10 and a half years. I've covered over 500 subjects. You can almost ask me a topic and I'll tell you I've written a column on that and give you a bunch of information. In the process I have become what I call a really well schooled general scientists. Notice how I say that. I know a little bit of astronomy, a little bit of geology, a little bit biology, a little

bit of, you almost name it and I know a little bit about it. That doesn't mean I'm qualified expert in biology, or in geology, but I can cover almost any subject and have a pretty good idea of what's going on. In other words I consider myself scientific literate in almost all the topics I dealt with. Which is a difficult thing to say.

Q: Your a specialist and a generalist.

A: I become a generalist in the last 15 years because of this newspaper column/radio show.

Q: I never caught the radio show, but I certainly read the columns in the *Alestle*.

A: Sure. And you have some idea of the quality I mean. By the way I'm telling you what other people tell me. They say the quality is very very good. You take the complex and make it simple. We can understand what your saying and so forth. That's what I was trying to do by the way.

Q: To me that is the essence of teaching.

A: That's right. I think so too.

Q: Make it simple.

A: One reason I did this I was very annoyed at the inability of the scientific community to convey information to the public. I still am. I think there should be thousands of us doing what I'm doing. I really do. We should also cross barriers and go to other disciplines and get new ideas. I have gotten oodles of ideas from this, just incredible ideas in recent, the last few years, it's just astounding. No kidding.

I'll give you an example of what I mean. I concluded after thinking about it after I gave a talk at Forest Park Community College about the greenhouse effect and the population problem in terms of pollution. I had some of the young women coralling me at the end of the talk asking how can we control human population. And of course I told them gee I can tell you what the problems are, but I can't necessarily give you the answers to them. So I really started thinking in that respect. And I dreamed up what the reason is. The way we can eliminate the population explosion is to increase the status of women in the third world. You might say now wait a second, turns out if you look at the industrial worlds - Japan, Germany, and United States and so forth, the women there have reasonable control over their destinies even though they have different cultural backgrounds and these countries have essentially a static birth rate - pretty close to it anyway.

If you look at the countries where the women are completely subjugated to the men and the birth rate is going crazy. You can take Bangledesh and Nigeria for two of the examples of what I am talking about. And so when women have no control over their destinies, the birth rate goes crazy. When they do have control over their destinies, the birth rate remains reasonable so the only way we

can ever prevent the birth rate from going bananas on us is to attack the status of women. Improving the poor status of women is the basic way of helping the situation.

Q: Well I would vote for that.

A: See that's the type of thinking that's developed from what I've done here and that's not the only one. Oh, I intend to write a book on what I call ultimate causes.

Q: Right after you retire.

A: Right after....oh yes. No kidding.

Q: Excellent.

A: I'll give you an example. You just had Mount Pinatueo take the Clark Air Force military base out in the Phillipine Islands you see. You say, gee that's a total disaster. Well I can tell you the cause of that. The cause of that was radioactivity. Radioactivity! This guy's crazy. No, no, no.

You see radioactivity keeps occurring in the center of the earth. When it occurs a few miles down, there is no place for the heat to dissipate and the interior gets hotter and hotter and hotter and hotter and finally it oozes out. We call it a volcano. So basically speaking we lost Clark Air Force Base in the Phillipines -

a very, very important military base simply because of radioactive decays exemplified in a volcano. So the fundamental cause of that volcano is still radio active decay. It's rather curious.

Q: Yes. All right.

A: Ultimate causes.

Q: Now let's just turn this cause over, Henry, from greatest contributions to greatest satisfactions around here.

A: Oh the greatest satisfactions - well I'm at the point where I can say well what did you do in your life. Well I went through my grade books a while back and I never did get finished doing this but I was up something like two or three thousand I think is the number of students that I've actually taught and I realized that in my teaching career, I have trained several thousands of individuals and that's dentists and physicians and veterinarians and physicists and you name it, they've come into my classes and they've participated in the development of our complex society and a prolongation of our complex society by doing this. I get a great deal of satisfaction out of that. I really do.

Q: That is very well said. I've never said it quite so well. I've just said I've had thousands of students and I certainly hope some of them make a difference for good.

A: I'm sure they have. I know some of them have.

Q: Now you used an expression I liked. Let's see, you said prolonging our quality of life.

A: That's right. Sure, sure. Oh yes. Oh by the way the quality of our graduates in recent years is not what it was ten years ago. I can tell you that right now on this campus.

Q: Up or down?

A: It's gone down. It's gone down, distinctly down. Not just slightly down but distinctly down. They are not as well versed as they were before.

Q: Okay. I want to bring that up in a minute.

A: They're just not as well versed. I'm not kidding you. But part of the problem is that they don't come here and get enough information. That's the number one problem.

Q: Yes. I want to come back to that. Let's finish up this, your greatest satisfactions and then we'll get to this other...

A: Oh sure. That's probably the greatest satisfaction. I feel as though I have accomplished something in my endeavors to a lifetime. No question about it.

Q: All right.

A: I think it's a rather significant one too.

Q: Well those of us that entered academic life especially those that came out of the real world and real money into academic life perhaps feel this more strongly than those of us who have been largely academic.

A: Well, see, I've been in industry for the order of ten years. Of course I've been in the U.S. army for 3 years so I've seen the real world if you want to call it that. Other than academic I have some rather glaring looks at the real world if you want to call it that.

Q: Now Henry Firsching, your greatest frustrations around here?

A: Oh the greatest frustrations are simply around here. There was simply not enough money, not enough space, I could just go on and on in terms of this. Especially not enough money and not enough space. Constant problems throughout my entire career. Insurmountable problems. No way you can get the money, no way your going to get the space. That's all. It is really frustrating. I still have that same problem. I'm trying to wrap up some research right now. And I got some undergraduate students working and here I got a small room. It's not quite as big as your office. We had three students and myself working in there one day and that's almost impossible. You are practically standing on each others shoulders in the room. No kidding.

Q: Now this is partly I suspect because the kind of equipment you need is very expensive.

A: No, in fact, I've changed my research so I don't do that. I simply decided there's no way I'll get that expensive research I've got to do something with minor materials low cost kind of research. I'm working on solubility. Well, here's another satisfaction. About ten years ago I was looking in the literature trying to separate the rare earths. And there was no information on the solubility of various compounds. I said to myself this is all mental of course, not verbal. I said to myself, my heavens why doesn't someone determine the solubility of these things. Then I said to myself you don't do it nobody else will and that's quite right. If I didn't do it nobody else will. So I've been doing it and I have a series, about five different series now. I essentially single handedly have doubled the solubility information on the insolubility of rare earth compounds by myself. That's one sixth of the periodic table by the way. I did it on a very low budget too.

Q: All right now for a layman that only vaguely understands what the solubility of a rare earth is, what does, I mean so what's the application of that?

A: Oh there's many applications. The first one is separating the rare earths. There's fifteen elements in there and I've got to know whether element number one is more soluble than element number fifteen. Which one is the most soluble. I'm going to try to separate them. There was no information on that at all. I don't

know. Maybe the most soluble may be in the middle, but I had no way of knowing what the most soluble one was. I just had to proceed without any data.

Q: Now I vaguely remember that there was qualitative and quantitative chemistry.

A: Of course that's right.

Q: Now separation would be quantitative?

A: Depends on the separation. If you're talking about the rare earths you can't really do it for them. They're so close that you can't get a quantitative separation. You can get an improvement. If you start out with a one to one mix, you get a two to one mix or a five to one mix back. In other words you get element a and b. There one to one. When you finish, you have five parts of a with one part of b and five parts of b with one part of a, something like that you may get.

Q: I heard of a kind of a trick that in qualitative each student was given something and they had to prove what it was.

A: Yes. That's right. Sure - typical.

Q: And one of them ended up with water.

A: Of course.

Q: And I was told that the only proof for water is that it isn't anything else.

A: By the way, that's the worst unknown possible. I never would give an unknown in a qunatitative course of just water. At least they would have one substance in there, at least one.

Q: Oh. I see.

A: I thought that was unfair. I really did.

Q: Well maybe it was. Maybe it's just a graduate school horror tale.

A: Anyway this has been done. Many people do this but I disapprove of it and I think it was unfair. I really do. I think it's unfair.

Q: I see. All right. Well let's bounce back on the other side of the fence for a moment, best memories over 28 years here.

A: Gee now that's gonna be a problem because I enjoy so many things so often and I don't necessarily dwell on any one thing and look back and say, oh gee I wish I could have the good ol' days or something.

Q: Well one, two, three.

A: I really don't know what to say to that. I really don't.

Q: Well teaching, colleagues....

A: Oh I thought (words unclear) say for example my daughter graduated from here with an engineering degree. nd my wife graduated here from a masters degree. This was also very interesting to me at the time.

Q: Well SIU is a Firsching family affair.

A: Of course. Sure.

Q: Well that's not true for everyone.

A: Of course not. No. I've had children go through here. Let's see. My daughter Kay Lynne graduated with a degree from here. My son Michael is a veterinarian and got a degree from here. Joel just on the verge of a degree right now. Wendy did get her degree in engineering. Kathy didn't go to this school. My daughter Kathy didn't. My son Matthew right now is on this campus in the Music Department and is doing very well. So we've had most of our family go to school right here. That's very important to us as a family to have this campus present.

Q: What are your worst memories around here?

A: Oh the worst memories. Oh there's one very worst memory without any question. There's absolutely no doubt about this one.

Q: I've rung your bell.

A: Oh yes. Oh this one was when I filed a grievance against the temporary chairman and the temporary dean in the Science Department about my yearly evaluation.

Q: Uh-huh.

A: And in a grievance it's supposed to be handled in something like, I think it was 60 days or something like that at the time. It did not get handled until eight and a half months that dragged out--eight and a half months. I was continually harassed by both the chairman and the dean throughout this period of time. When I say harassed I mean given teaching assignments, all sorts of harassment. Every possible thing you can think of was tried during that period of time. All kinds of surprises and so forth and the result was when it was all done, the committee did not find in my favor. They said they were unable to evaluate mine with respect to somebody elses performance and so forth and it was a total frustration.

I ended up having to hire a lawyer, something like seventeen hundred dollars in lawyer's fees for that. I mean a faculty member here can not get, I'm going to call it a fair shake in any kind of grievance procedure. It's not worth it. I would advise anyone, do not file a grievance. Leave the campus or something, but don't file a grievance. You're totally wasting your time. You're going to be

totally frustrated and totally harassed. That would be my view on it. That was by far the worst experience on this campus. There was no question about it, by far the worst experience.

A: I can imagine.

Q: No kidding. Really.

A: Well you survived of course.

Q: Oh I've got a lot of resilience,,, but my goodness you talk about mental pressures and dirty looks and oh, innuendoes, just terrible. No kidding. And it dragged on and on and on. It would never get finished. I mean just never see it finished.

A: I chaired a grievance panel once in my school.

Q: Oh I'm not necessarily blaming the people on the grievance panel. I'm blaming the whole damn organization. These guys came in there (words unclear) on I think too I might add and they haven't got the time to look into this in detail and so forth. I'm well aware of that, but the whole thing was just so ugly. That was ugly.

A: Well, Henry, maybe they don't have the time, but damn it they're supposed to take as my committee did. We held depositions. People brought witnesses. When we made a decision well...

Q: Oh I imagine the total amount, we must have had something like ten meetings. It was all recorded and everything else. The nasty things that went on were just incredible. I'm not kidding.

A: Well most unfortunate. I hope your second. I hope any other of your worst memories weren't....

Q: Oh nothing even approaches that. Nothing even comes anywhere near it. That was by far overwhelmingly bad. Yes.

A: All right then what were some of the medium?

Q: Oh I've got one going right now. Emil Jason, is chairman of our department and he got on my back about 4 years ago and I don't know why he got on my back. And never could find out. I asked him what am I being charged with. Your not being charged with anything and yet when he called me into the office one time and told me that I would have to retire in the next two years. I said you have nothing to say about my retirement at all, and he doesn't, by the way. The chairman doesn't.

He also told me I was totally incompetent to teach anything but Chemistry 111 and that was all I was going to be assigned for as long as I was on this campus. And then he proceeded to give me two assignments of Chemistry 111 per quarter for the next year without any stopping. And after that happened I went to our new vice-president and provost, Werner. Told him the story and I said now that's the easiest teaching assignment I've ever had I said. I said it was totally ridiculous. I said when I talked to him I said

this, I said, I want you to bring to your attention to some university resources are being mishandled. I'm the university resource that's being mishandled. And I said that was ridiculous. That was the easiest teaching assignment I've ever had. It looks like a conspiracy between me and the chairman, I said. But it isn't. It is strictly his doings I said. And I said, I don't mind this teaching assignment. I like teaching 111, I always have. I said, but teaching one simple subject like this is putting me to sleep. I said that's all I can do. I said if you don't do anything, I'm not going to do anything.

But immediately there was a change in assignment and I taught other reasonable courses since then. So I talked to Jason just about a month ago, and I said what's this all about. Well, I'm not doing anything to you. I said, oh don't hand me that, your still doing it. And he said, oh no I'm not doing anything. I still don't know what his bug is about it. I have never figured it out. I've never been charged with anything. I have no idea what the problem is. It's strange. By the way this is a minor, I just kind of ignore this that's all.

Q: Some humorous things, that happened over the years.

A: Oh, humorous things. One of the things that isn't exactly humorous, but I think it is note worthy and has some startle value to it. And if you look at it afterwards you can see some humor. This is back in the old days in Alton. One day a young Starling fresh out of the nest fell down to the floor. Obviously he was severely damaged in the fall and the students brought it to me and asked me

what are we going to do with this starling. Well, I look at this thing and I realize that it's probably going to die from it's injuries and I didn't know what to do with it. We didn't have any money for veterinarians.

Well, the only thing that comes to mind is this thing is going to die in misery and we should do something useful to it we can give to Ralph Axtell becasue he has rattlesnakes that neemd live food. You should see the students they just absolutely collapsed, but after they thought about it they said well that's probably right this will serve a useful function the bird is going to die anyway and this way a mouse or something else won't have to do. So we did give it to Ralph Extel. He did feed it to his snakes and his snakes did eat it.

You can see the point here. I don't know if it's humor or not. But you see the point. It's a rather startling situation. If someone wanted me to do something with this bird, nothing was satisfactory. Looking back this was probably the most reasonable thing to do. One other funny one happened. This is funny. If you know J. Edmund White, Dr. White, Well his wife. Do you know his wife?

Q: Yes, yes. Betty. Isn't it?

A: Well, this is the early days in Alton and I was in there in the little bursars office across the street from the main campus, in the little tiny office. And she was in front of me in line, see, and she was trying to cash this check and the woman asked, do you have any identification. Well, this man can identify me right here. I said I've never seen this woman before in my life. Betty was just

startled for a minute until she realized I was pulling a gag. And she still thinks boy I don't know why I talked to you after you did that to me. Well, that may be the type of humorous thing your talking about.

Q: Yes, that's really funny in a dumb way.

A: Of course you've got to do some startle things.

Q: Well that's two good ones let's go for a third.

A: I can't think of any right now. That are that particular type. The only thing I can think of that happened funny is one day in a freshman class we were talking about sodium chloride and how you electrolyze it and so on and get these compounds coming off and this student got very excited and he said oh Dr. Sodium. Right there in the class. He didn't even realize he made a mistake and I said, yes Mr. Chlorine what did you want.

Q: These are some of the best dumb dumbs that I've gotten.

A: Well I really like the humor sort of thing. I really do. The straight forward stuff is never any good. But that one about Dr. Sodium and Mr. Chlorine just popped right out, just a student. Dr. Sodium.

Q: Well, at least he was listening.

A: Oh I think it was marvelous. It was really animated and really worked up into this stuff and didn't sit there like a block of wood, like a lot of people.

Q: Did you ever have anything to do with off campus relations?

A: Oh, I did a great deal. In fact I'm still doing a great deal of that. I'm still doing that. The last 5 to 8 years, I've got myself on the American Chemical Societies Speakers List on a whole string of topics, including nuclear winter, the green house effect and things like that. And I get calls from schools and civic groups to give talks to these people. I've also got myself on the Speakers Bureau on the campus and I get it from that too. And I've gone to high schools and to junior colleges and civic groups and all sorts of communities and do some where in the order of 10, 15 talks every year.

Q: That's a rather high number.

A: Yes, it is. Right now I have one scheduled for something like September, Friday, September, something like the 19th, I think it is. I hope I remember the day and get there on time. And I'm going to the Belleville West High School and I'm going to give 3 lectures there. We'll cover something like the 200 students that are in science in that school in those lectures. It will be on the origin of the elements. How the elements actually get formed. It's not

available in textbooks. Something I picked up in developing for my course for the Origins of Life. So I'm going to give that talk that scheduled right now.

And I commonly give the nuclear winter talk it is what happens when the nuclear bombs go off. Commonly give the Greenhouse Effect and in the Gerontology group I have talked there for something like 10 years now. Sometimes I've talked twice in the same year when they've had speakers bomb out on them. And I've given all kinds of talks there. This year I'm going to give one on aspirin, a miracle drug.

Q: Obviously you do a great deal of what we call community service.

A: Oh that's right.

Q: Many presentations and lectures in the area.

A: Yes, that's right some where in the order of 12 to 15 per year for the last 5 to 8 years.

Q: Have you had much to do with the educational disadvantaged? Around here or anywhere?

A: No, All of this has been on high school level and, oh once in a while I have done this in elementary school. When my children where in there I did talks for elementary schools, just very low keyed stuff. But no disadvantaged no never. I never worked into that.

Q: What do you feel have been the greatest contributions of the university to the area?

A: I think just being here is a fantastic contribution. I am not just kidding. This area is what I call provdential, I guess one might call it. It was stuck right in it's own little circle and didn't have any idea what the outside world looked like. On this campus we bring in people from Nigeria, from what not. They come here. They see them. They wouldn't see these people if they weren't here. The very fact that we're here is an extremely important influence on this community.

The fact that it has the available expertise. They want people to be trained in these various areas, I'm sure has been invaluable to many many thousands of individuals in this organization around this campus in the communities here. It has been a wonderful opportunity for people really, that otherwise would never had had.

Q: Now you mentioned some of your students, doctors, dentist, chemists, scientists. Do you have any feeling as to how many of our science graduates stay in the area?

A: I'll put it like this. In something like dentist and doctors and vets, most of them are still in the area. In at least a hundred miles of here. When you talk about the chemist who become professional chemist, they very often have to go off to something like Notre Dame or Berkeley California or Penn State something like that and they don't tend to stay in this area. Just the nature of

the business, by the way. They get trained in a specific thing and they go to a job opening where it's available where it happens to be and it may be in Seattle Washington, next year it might be in New Orleans, so the probability of being in St. Louis is very small.

Q: Well, how about the field of petroleum chemistry? Is there such field?

A: Oh yes there is a field in that. Sure organic and hydrocarbon chemistry certainly is a field. It's not what I call in the frontiers anymore. During the 30s, 40s and 50s it was very very imaginative, but they pretty well got it all down to a pretty straight forward stuff. Bio-chemistry is an area with this gene splicing.

Q: I'm of course referring to the huge refineries in this area.

A: Of course, that's right. And this is pretty well standardized now, how to handle all this material in chemical engineering.

Q: Well, do some of our graduates go to the refineries?

A: As far as, I was talking about doctors degrees. If you talking about a masters and bachelors, almost all the bachelors and masters stay in this area and I'm sure some of them are working for the oil companies in the immediate area. Oh, I'm certain of that. Oh yes, oh yes. I was thinking of a doctorate degree.

Q: Either way.

A: But a doctors degree in medicine and dentistry, they tend to stay in this immediate area.

Q: How many of your students have gone into teaching?

A: A fair number have. In fact I had an interesting situation, a fellow named Michael Smith, and we have a Michael Smith on our campus who is in the art department, but this is a totally different Michael Smith. He ended up getting his doctors degree out of Columbia, Missouri and then he ended up a chemistry professor in Dayton, Ohio at Wright State University there. So he's the only one I know of that became an actual chemistry professor who was a research student. He worked in research for me for a couple of years.

Q: How about public school teachers?

A: Oh there's a great many of those. Oh there's a lot of those.

Q: Our graduates, your graduates.

A: Our graduates - oh yes, yes, yes. One of them immediately comes - Kenneth Gattung who had been a chemistry teacher in Granite City and I believe now, I think he's in O'Fallon. I think that's where he is. He might be in Belleville, but I think he"s in O'Fallon and he's been a chemistry teacher for about twenty years now and he was one of

our bachelor's degrees. I've talked to him several times since then. We're still very good friends. And there's a number of those. He's not the only one. He's the one that immediately comes to mind.

Q: If I could only interview two more people who would you suggest.

A: Oh. If you haven't hit J. Edmund White, you certainly should get him.

Q: Jed. I have him.

A: He'd be number one and of course I would immediately say Paul Gunther, but I'm sure you've probably taken care of him too.

Q: Yes, yes.

A: Because he'd be another one who would be very knowledgeable of the whole broad picture but after that somebody you might not have talked to, well I'd say Ralph Axtell might possibly be someone you should talk to.

Q: He's supposed to phone me.

A: Okay well anyway I'd say he would be one. Let's see if there's anybody else I can immediately come up with at the moment. What about - I don't know if Ik-Ju Kang has been here long enough for that. He's been here about twenty years. Whether he's been here twenty-five, I'm not so sure about that.

Q: I know Ik-Ju.

A: He would be someone that would give you a view of the physics area that you wouldn't get - Oh there's another one in physics. What the heck is his name. I can see him and everything else. I just can't think of his name at the moment.

Ik-Ju has been here probably twenty years but I doubt if he's been here twenty-five.

Boedecker is the one that's been here long enough. He'd be one you should get too.

Q: Who?

A: Boedecker in physics. He's been here at least as long as I have. He's been here at least twenty-five years.

Q: All right. Good.

A: I forget what his first name is now. Gee I should know his first name. Boedecker - I've talked to him off and on for twenty-five, thirty years.

Q: Hank if you had to do it all over again, would you do it?

A: Oh yes. Oh, oh yes. The only thing I wish would be a few in terms of money and space that would have been a little bit better accommodation there. One thing it led me to do it, led me to go into the radio show and newspaper column that I might not have done. I wanted to pursue something intellectually stimulating to me and that was what I went into and I'm very pleased I did. I got a grasp of things I would otherwise never have. So even the difficulties, you have a lemon you make lemonades. So I don't know. It's fine. So in other words you say am I regretting what, no, no, no. I think it's been a very useful contribution without any question. I have no - saying, oh gee I wish I did something else. I don't feel that way at all.

Q: All right.

A: I am really quite satisfied with the situation and how I performed really.

Q: Is there anything you would wish to add to any of the topics we have discussed?

A: Oh gee.

Q: Well you know like good memories, bad memories, humorous memories, contributions, frustrations...things like that.

A: Well one thing I think is probably worth, now this is a general, overall, personal judgment made without having data to back it up.

Q: All right.

A: That is the quality of our students.

Q: All right.

A: See now the quality of our students. When I first came here, I came from the University of Georgia to here and I was impressed how much better the average students on the campus were than the ones I had down at the University of Georgia. They were distinctly better. There's no question about that. They just had better competence; better ways of writing and so forth.

I didn't run into that problem that people couldn't write a single sentence. Now the years go by and when I look back at old tests I gave twenty-five years ago versus what I'm giving now, it's much, much simpler what we're giving now than then. Believe me. The quality of the effort we require has been noticably diminished and I attribute this to a rule called retention which when you translate it, it comes back don't flunk anybody. That's what it tells you. I mean that's really what retention is saying and retention,- it may have some value, but oh boy it simply means that you can graduate without doing any work and a lot of people are doing that on this campus. I am appalled sometimes at the low quality of the educational or the, I'm talking about the scholarly abilities of our potential graduates is rather poor in many cases.

I am really somewhat ashamed of that where the quality of the students has depreciated in the last twenty years, well especially in the last ten. And incoming students are nowhere near the quality that they were twenty-five years ago. They just aren't. In fact I've made the statement that many of our incoming students in high school know probably almost nothing about everything. You ask them about geography and they don't know it. You ask them about history and they don't know it. You ask them about anything you could think of and they won't know it.

For example, I teach this Chemistry 111 which is for non-science majors and I was teaching a class in there and I suddenly was talking about the greenhouse effect and I was discussing Antarctica. I asked a question. Do you know where Antarctica is? And I went through something like four people before a young women says yes it's up near the north pole. I realized the students have no idea what I'm talking about when I'm talking about Antarctica. So then at the end of that period I said well next time we'll be talking about nuclear winter. I said by the way, before we get to that I want to ask you a question, What do Hiroshima and Nagasaki mean to you? And I went through seven people before one student said, it got bombed. I said that's absolutely right, but you have to expand on that because half the cities in the world got bombed during World War II. She couldn't tell me anything more than that. But I think that's dismal, I really do. It shows me that they don't know geography, and they don't know history. And of course, I know they don't know science.

Q: And the according to *Time* magazine, the SAT scores have recently dropped.

A: Oh of course. Oh, there's other things. But I'm just talking about my own personal judgment which I have no scientific data to support it. This is my judgment for which I have observed. This story of course could be distorted there's no question about it. That's my feeling. Students are much less qualified now, less prepared for the courses and they don't know how to study. That is the number one problem. They don't know how to study. They have little to no self discipline is what I call it. They won't make themselves sit down at a desk and study two hours a day. They simply won't do it.

Q: I try to give everybody a chance to pick up and amplify anything or add to anything they have discussed and so let's just think once more. Any more stories that come to mind, any other frustrations that come to mind?

A: I've got something I'd like to mention in terms of the campus we have now versus the campus we had back in the Alton days.

Q: All right.

A: And it was a fantastic, what I call esprit de corps with what you might call it that they developed back in Alton that has never even remotely been achieved here. What we end up, we end up compartmentalized. We're in little compartments. You in history. I don't see you people some times for six months or even six years.

For example there was a fellow named Baker in Geography. I use to see him just about every day and we would talk about things. Well, he came on this campus six years before I saw him the first time.

Q: Bill Baker.

A: That's right. I can remember saying my goodness I haven't seen you in years. That's right. It kept us apart. It broke down the relationships we had between departments. It broke down our mutual cohesiveness. We become little independent isolated rattling in our own little boxes. We don't know what's going on any place else. It's a dismal, poor arrangement compared to what we had in the Alton days. The Alton days had a esprit de corps. That group was never achieved since then. It's deplorable.

Q: Most everyone that comes in here. The people in East St. Louis say the same thing. And we did lose a great deal coming out here.

A: A giant step in the wrong direction.

Q: Well, there's one thing that was just briefly touched upon and that is you are going to retire New Year's Eve of this year. And I understand I believe I heard you say that you have lots of things to do, lots of ideas, and your going to start working on a book.

A: Yes, oh sure part time.

Q: Well,

A: Well, I have two books I'm thinking about working on. Sure.

Q: That's kind of a high point and I think Professor Firsching we'll end on that and we'll wish you well in retirement.

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